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R E P O R T   R E S U M E S

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IMPROVING THE LEARNING ENVIRONMENT, A STUDY ON THE LOCAL
PREPARATION OF VISUAL INSTRUCTIONAL MATERIALS.
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INDIANA UNIV., BLOOMINGTON
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THIS INVESTIGATION DEVELOPED A GUIDE TO AID IN IMPROVING TEACHER EFFECTIVENESS. IT SHOULD ASSIST ADMINISTRATORS AND SUPERVISORS TO INITIATE AND EXPAND PROGRAMS FOR THE PRODUCTION OF VISUAL INSTRUCTIONAL MATERIALS. IT REPORTED ON THE NATIONAL STATUS OF LOCAL PROGRAMS DEVELOPED AND PROVIDED CASE STUDIES ON OUTSTANDING ONES. TEACHER OPINIONS AND SPECIFIC RECOMMENDATIONS WERE INCLUDED FOR INITIATING AND EXPANDING LOCAL PRODUCTION PROGRAMING. (RS)

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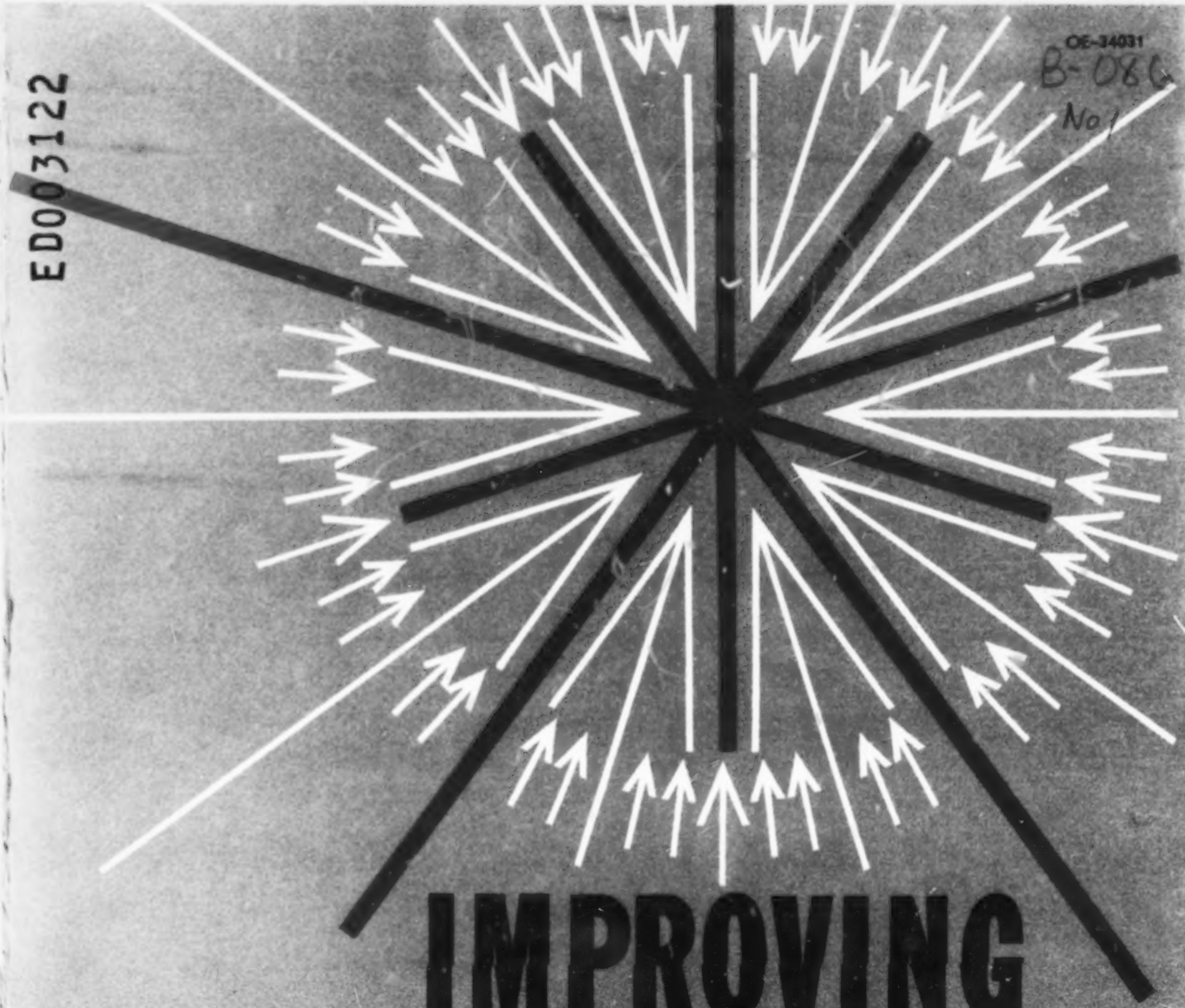

IMPROVING THE LEARNING ENVIRONMENT

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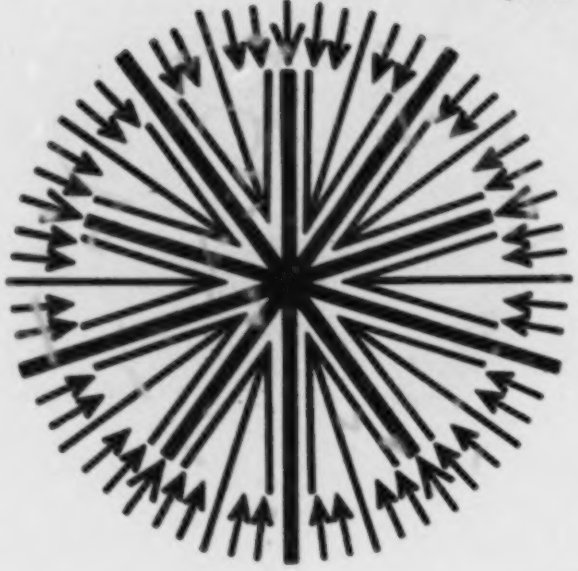

IMPROVING the LEARNING ENVIRONMENT

A Study on the Local Preparation of Visual Instructional Materials

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FOREWORD

This guide has been prepared to assist school administrators and audio-visual supervisors in the initiation and expansion of programs for the local production of visual instructional materials. It reports on the national status of local production programs developed to serve in individual school buildings, school systems, and public school educational television stations, and provides case study reports on schools underway with outstanding programs.

The graphic and photographic techniques used in preparing the layout and illustrations for this manual are all local production techniques provided for in the suggested program.

The need for this manual is reflected by the requests for information, consultation, and personal help with workshops and institutes which the U.S. Office of Education and the National Education Association have received in increasing numbers the last few years. This manual answers many of the commonly asked questions and provides valuable guidance to those seeking to develop a beginning program in this important area or to expand a program already in operation.

John Gough, Acting Director,
Educational Media Branch

Ralph C. M. Flynt, Associate
Commissioner for Educational
Research and Development

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CHAPTER I

THE ROLE OF LOCAL PRODUCTION IN THE IMPROVEMENT OF INSTRUCTION

THE ROLE OF LOCAL PRODUCTION IN THE IMPROVEMENT OF INSTRUCTION

Recent national and international developments have put unprecedented pressure on our American system of education. Problems of increased enrollments at every educational level, mounting shortages of qualified teachers, insufficient and inadequate school plants, and demands for more school tax support constantly confront the American public for solution. At the same time that these straightforward problems of providing each youngster with a classroom and teacher are taxing our ingenuity and pocketbooks, the space race, automation, and recent technological developments are demanding curriculum revisions and a re-examination of the efficiency of our traditional methods of instruction.

Obviously all of these problems are inter-related, and solutions will require many and varied approaches. The authors of this study attempted to investigate only one avenue of possible attack—that of improving teacher effectiveness through the provision of more and better locally prepared instructional materials and the resulting improvement in teaching methods and utilization procedures.

In 1959 President Eisenhower's National Science Advisory Committee stressed the need for all types of instructional materials in its report, *Education for the Age of Science.* They expressed it this way: "Finally, and perhaps most urgently, we must devote very substantial resources to developing and supplying teachers with far more adequate and up-to-date teaching and learning aids of all kinds."[1]

The staff of the American Association of School Administrators reaffirmed the fact that instructional materials give shape and substance to the school curriculum and vitally influence the teaching-learning process in their statement: "Without appropriate materials, a modern educational program is an impossibility. Upon the superintendent falls the task of *getting* better materials and *making* them available to teachers."[2]

What kinds of teaching materials do today's teachers need to aid them in providing an excellent learning environment? In Figure 1 are included the major types of instructional materials and equipment which the authors think that classroom teachers should have available if they are to provide the kinds of learning stimuli that are needed to prepare students for present societal demands. Obviously these materials are not needed in every classroom at all times, but we think that they should be available for the teacher's use when the need arises. If carefully selected and wisely used, each item has a unique contribution to make in enhancing the learning process.

Notice that these needed instructional materials tend to be of two kinds: those commercially produced and/or transmitted and available to schools through purchase, rental, or loan; and those which are produced by personnel within schools to meet a specific local and frequently individual need.

* COMMONLY USED AUDIO-VISUAL MATERIALS

First, let us consider the most commonly used projected visual aids—educational films and filmstrips. Although many teachers still proclaim they do not use films and filmstrips because there are not any related to the specific curriculum units they teach,

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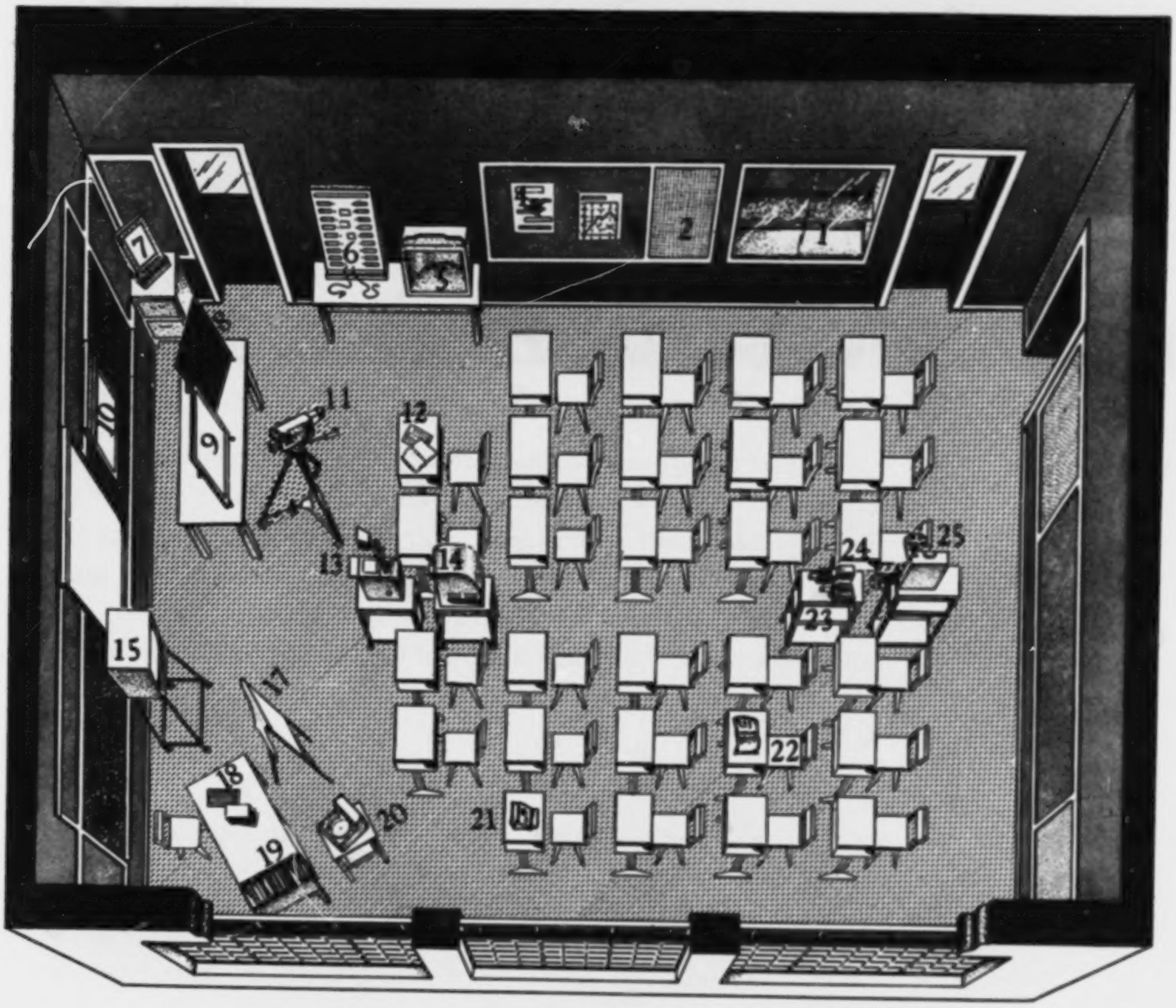
[1] President's Science Advisory Committee, *Education for the Age of Science,* p. 11.

[2] A.A.S.A. staff, "Tools for Teaching," in *NEA Journal,* 48:51, December, 1951.



1—Display Case
2—Peg Board
3—Bulletin Board
4—Posters
5—Diorama
6—Electric Board
7—Light Box
8—Flannel Board
9—Magnetic Board
10—Wall Charts and Maps
11—TV Camera
12—Books and Manuals
13—Overhead Projector

14—Opaque Projector
15—TV Receiver
16—Chalk Board
17—Flip Chart
18—Passouts
19—Still Picture File
20—Sound Recorder and Play Back
21—Teaching Machine
22—Programmed Learning Materials
23—2 x 2 Slide-Filmstrip Projector
24—3¼ x 4 Projector
25—Motion Picture Projector

Figure 1. Major Types of Instructional Materials and Equipment Useful in Classrooms.

a careful perusal reveals an impressive collection. Wilson's *Educational Film Guide* includes descriptions of more than 23,000 motion pictures, and 13,000 plus filmstrips are reported in *Filmstrip Guide*.

Although not so well catalogued, educational records, slides, and tapes are available for use in teaching numerous topics or units now included in the public school elementary and secondary curricula.

* MASS INSTRUCTION THROUGH NEWER MEDIA

● Educational Television

The growth and acceptance of educational television as one major solution to the increased demand for more and better instruction have been most encouraging. Very few educators, or even laymen, cannot cite examples of its phenomenal growth. Here are a few examples reported by Meierhenry and McBride,[3] Fusco,[4] and others as a result of national studies of the use of television in today's schools:

1. Two hundred seventeen school systems and colleges teaching television courses for credit;
2. At least 572 United States school systems making regular use of television instruction and more than 500,000 students receiving some instruction via television;
3. Approximately 16,800 (or 92 per cent) of all students in Washington County, Maryland, receiving classroom instruction via closed-circuit television;
4. More than 45,000 students in Dade County, Florida, receiving at least one class via open-circuit television;
5. An estimated 500,000 students in more than 2,000 schools in the six-state area of Indiana, Illinois, Kentucky, Michigan, Ohio,

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[3] Meierhenry, W.C., and McBride, J., co-directors, *A Study of the Use of In-School Telecast Materials Leading to Recommendations as to Their Distribution and Exchange,* 137 pp.

[4] Fusco, G.C., "Technology in the Classroom—Challenges to the School Administrator," *School Life,* 42:18-23, March, 1960.

and Wisconsin receiving programs transmitted via airplane as part of the Midwest Program of Airborne Television Experiment;

6. State networks a reality, in varying degrees, in Alabama, Florida, Oklahoma, Oregon, and California. State educational networks also planned in Michigan, Ohio, and Tennessee with interstate planning proceeding in the Southern States, the Upper Midwest, and the Western States;

7. Several regional networks now in operation; and as far as technical obstacles are concerned a nation-wide, instructional television network is feasible. In fact, it is in a sense a reality since 241 colleges and universities are or have already given credit for the Continental Classroom Physics Course.

● Emergence of the Filmed Course

The dramatic emergence of instructional television on the educational scene has tended to overshadow another important innovation utilizing the technology of mass instruction—the filmed course. The traditional production pattern for the development of classroom films has been to produce single films related to one aspect or topic in a specific academic area. At most, a series of only a few films related to one academic topic was developed.

Within the last few years this pattern has changed from one of producing a few films to be used as supplementary material in a course to a series of films developed to serve as a major resource or a complementary role in instruction. The 162 half-hour physics films—the pioneer in filmed courses—and the biology series of 120 half-hour films of the American Institute of Biological Science are now being used and evaluated by thousands of American high school students and teachers. Also, high school chemistry is not without a film series. The American Chemical Society and the Ford Foundation collaborated with Encyclopaedia Britannica Films to produce 106 half-hour films for this high school subject. The filmed series is beginning to provide substantial amounts of materials to meet specific curricular needs in the science areas.

Another promising practice in using technology to provide better means for large group instruction has been the increased experimentation with the use of the overhead transparency projector. Newton High School's teacher-lecturer, Henry Bissex, has pioneered in the practice of presenting lectures in sophomore English to up to 210 students in one class. Relieved of paper-correcting and extra duties, he has time to perfect his lively lectures and develop visual materials in the form of 10 x 10 transparencies, which he regards as essential for effective communications with these classes. The sophomore pupils come to these large-group lectures in English once a week. The rest of the week they meet in their regular classes for discussion, analysis, and review of the material presented at large-group lectures. Many teachers throughout the country are discovering ingenious ways of making instruction more effective through similar uses of the overhead transparency projector.

*SELF-INSTRUCTIONAL DEVICES — EDUCATION'S NEWEST DEVELOPMENT

But enough of mass instruction technology! What about the educator's latest innovation—self-instructional devices?

First, what do these include? In his informative article, *Technology and the Instructional Process,* Dr. Finn lists five types of such devices on an ascending scale of sophistication:

1. individual reading pacers and similar devices;
2. individual viewing and listening equipment for existing slides, filmstrips, motion pictures ,and recordings;
3. language laboratories of all types;
4. specifically programmed printed materials, such as scrambled textbooks and the Lumsdaine notebook;
5. true teaching machines of the Skinner or Pressey type containing carefully worked out verbal or pictorial programs with various ingenious mechanical or electronic

arrangements to test the student reaction and inform him of his progress, errors, etc.[5]

How important a contribution will they make? No one knows as yet since self-instructional devices are still in the field-testing stage of development. Many educators are confident that the unique ability of self-instructional devices to provide individual pacing and immediate feed-back for students utilizing a carefully developed and tested program will assure them a vital place in the teachers' kit of indispensable instructional resources.

* TEAM TEACHING— A MORE EFFICIENT UTILIZATION OF TEACHER S' TIME AND TALENTS

In an effort to effect greater efficiency in teaching, many educational groups have also begun to question the traditional one teacher to thirty students ratio. They are searching for new ways of grouping youngsters to take advantage of special talents of teachers, of avoiding unnecessary duplications of film showings and repetitions of identical lectures, and of providing more individual guidance and small group instruction.

In the 1958 publication, *Mass Communication and Education,* the Educational Policies Commission hypothesized that ". . . within a few years the most efficient grouping will consist of classes ranging from several hundred to one student; that although such a system will also be convenient because of the flexibility of new teaching tools, the individual abilities of the learner, not convenience, will be the primary reason for class organization."[6]

In recent years many school systems throughout the country have tried out team teaching—several teachers working together with varying sized groups of students during an adjustable time period—and are now adopting it as a more effective method of using teacher talents in ever increasing numbers of subject areas. *Images of the Future,*[7] the forward-looking proposal developed by the Commission of the Experimental Study of the Utilization of the Staff in the Secondary Schools, has served as the pattern for many of these schools.

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[5] Finn, J.D., "Technology and the Instructional Process," *Phi Delta Kappan,* 42:374, June, 1960.

[6] Educational Policies Commission, *Mass Communication and Education,* p. 104.

*THE SYSTEMS APPROACH— AN ATTEMPT AT OPTIMUM ORGANIZATION OF MEN, MATERIALS, AND MACHINES

Undoubtedly one of the greatest challenges facing educators in the next decade will be the systematic arrangement of these many learning components so that the unique potentialities of each component can be realized and programmed in such a way that learning of specified objectives is most effectively and economically achieved. How well American educators and the lay public can throw over their many provincial and tradition-bound methods and generate the ingenuity and foresight needed to develop a technologically-oriented systems approach described by Hoban as "an *integrated complex of ideas, organization, management, and machines*"[8] remains to be seen. We know that this is a must since an efficient educational system is an essential to survival, let alone progress!

One of the important elements in any effective systems approach to instruction will be provision for both commercial and locally prepared instructional materials. Whether the medium is television, overhead transparencies, slides, turn-over charts, or even programmed learning devices, experience has indicated that quality programs require access to many kinds of visual materials.

Where are these instructional materials to come from? The commercial materials, such as films, filmstrips, and audio materials provide invaluable but incomplete resources. School purposes, needs, and audiences vary. Therefore, many specialized materials, such as posters, felt, magnetic and pegboard materials, still picture sets, maps, and transparencies frequently must be produced locally because they are not available commercially. Often local personnel can produce educational materials equivalent and sometimes superior to those commercially available at considerable financial saving to the schools.

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[7] Trump, J.L., *Images of the Future,* 48 pp.

[8] Hoban, C.F., Jr., *Research in New Media in Education,* p. 10.

* A RATIONALE FOR PROGRAMS OF LOCAL PRODUCTION

Before conducting this study, the authors reasoned that there were certain unique instructional values inherent in locally produced instructional materials. The interviews with teachers and audio-visual specialists confirmed these hypotheses, and Chapter IV presents more specific evidence substantiating these values.

● General Values of Local Production

First, they can be up-to-the-minute. There is always a considerable time lag between the time an event happens or a new instructional method is introduced and related commercial instructional materials become available to teachers. With adequate production techniques and facilities, a teacher may utilize the map appearing in today's newspaper to make an overhead transparency to project in tomorrow's class. Or pictures from the latest news magazine may provide materials for a bulletin board and display on the newest invention, political development, or economic crisis.

Pioneering teachers can develop visual materials to help in trying out new teaching methods, such as "set theory" in mathematics instruction or the use of visuals in language instruction or in visual testing.

Second, they provide functional flexibility for the teacher and the students. For example, a diagram of the human digestive system might be photographed from a reference book. A large photographic print might be made from the photographic negative for use by a general science teacher appearing on television. A number of smaller photographic prints might be made to be included with the lesson outline sent to other classroom teachers who will be conducting the follow-up discussion related to the instruction received via television. Two-by-two slides of this diagram might also be sent to each classroom teacher to aid in group re-emphasis, recall, or further study of the content presented in the television lesson.

Third, local production makes it possible to put the visual content in a form or medium which best suits existing physical and environmental conditions.

Fourth, and perhaps most important, materials can be produced which meet specific local needs of both teachers and students. Johnny becomes much more concerned about soil erosion when he sees photographic examples taken right from his home county—or even from his dad's own land! Geometry problems suddenly become worth-while when there is visual documentation that the local contractor needs to know angles and use geometric principles to put up the new supermarket. Betty, too, can not get along without graphic and photographic skills if she is to communicate successfully the findings of her science project to people attending the local science fair.

● Values to the Teacher

Use of personally prepared instructional materials often enables the teacher to attain a new high in efficient teaching. Reasons for this are many and hard to isolate. Perhaps these are the most important:

1. As one creates a teaching device, whether bulletin board, display model, slide, or tape recording, he is forced to evaluate the content of his presentation.

Strange as it might seem, one university professor highly respected in his academic specialty revised one complex table he was planning to use in a visualized lecture six times before he thought that it communicated accurately the ideas and relationships he wanted to convey.

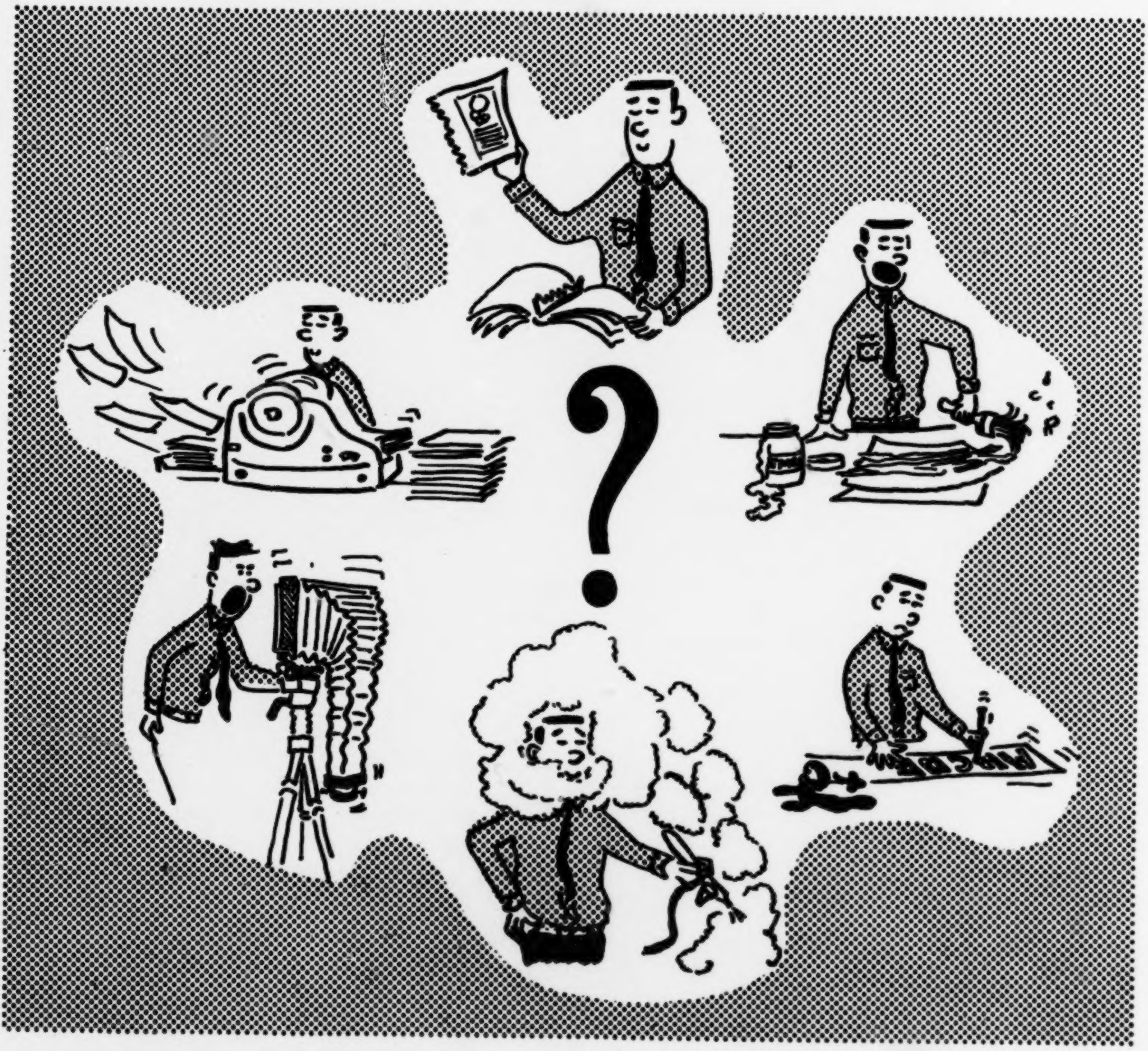
2. Since the creator is using his own time, talent, and energy, and usually has no one to blame but himself if his message is not communicated, he quickly begins to evaluate the points in his message, decides which points need cues other than those normally given orally, investigates the potential advantages and limitations of each of the many audio-visual media, and proceeds to consider carefully characteristics and needs of his intended audience.

3. Teachers who have experienced the enjoyment and satisfaction of creating a worth-while instructional aid tend to take pride in using it well.

4. There seems to be a greater inclination on the part of instructors for self-evaluation and the solicitation of student evaluations where locally prepared visuals have been used as part of the presentation than where the presentation is exclusively oral.

Obviously, many of the benefits of local production claimed for teachers would be equally valuable for those student assistants who might produce these materials for the teacher with the teacher and audio-visual communicator serving as the educational consultants.

In light of the many new developments in educational methods and techniques, it seems imperative that we investigate thoroughly the role of local production in implementing these new innovations.



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CHAPTER II

NATIONAL SURVEY OF LOCAL PRODUCTION PROGRAMS

NATIONAL SURVEY OF LOCAL PRODUCTION PROGRAMS

As indicated in the preceding chapter, the development of systematic programs to facilitate the preparation of visual instructional materials is a relatively recent innovation. Because of the newness of this field of endeavor, there is a paucity of information concerning the establishment, administration, and justification of local preparation programs. It was this recognized void that motivated the writers to undertake this study—a study to identify practices related to local preparation programs that appear to be working effectively in schools throughout the United States—and to recommend guide lines that would provide valuable information for individuals responsible for initiating or improving such programs.

Fulfilling the requirements of this study demanded that the writers have an accurate knowledge of the status of the local preparation field in public schools, particularly the existence of any new and promising developments. To attain this knowledge, a three-phase program was initiated which was to culminate in the selection of fifteen to twenty schools or school systems to be studied through visitation.

Since school visitations were to play such a vital role in this study, it was necessary to devise an objective procedure for the selection of the locations to be visited. With this demand in mind, the writers inaugurated the following program of activities.

PHASE I OF THE STUDY

This initial portion of the study consisted of an attempt to identify all schools, school systems, and public school educational television stations with facilities, equipment, materials and personnel devoted to the preparation of visual instructional materials. In an effort to identify all such programs, the writers sent six hundred questionnaires to the following groups of individuals:

1. Audio-visual materials and equipment dealers who were members of the National Audio-Visual Association in 1959-60.
2. A selected group of national audio-visual leaders working in United States public schools.
3. A selected group of college and university personnel listed in the U.S. Government publication, *Key Audio-Visual Personnel 1959-60.*[1]
4. The audio-visual specialist in the state department of education of each state.

A total of 329 questionnaires were returned with 312 programs suggested as meeting the requirements of the study.

PHASE II OF THE STUDY

A second questionnaire (see Appendix A) was then prepared and sent to the audio-visual specialist in the 312 schools identified in Phase I. The purposes of this questionnaire were to validate the information provided in the first questionnaire and to obtain additional data for the selection of those programs to be studied through visitation. Returns from the second questionnaire enabled the writers to locate 130 local preparation programs. Table 1 indicates the results obtained.

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[1] Daugherty, Annie R., and Reid, Seerley, *Key Audiovisual Personnel 1959-60,* 94 pp.

Table 1. Questionnaire Responses Indicating Existence of Local Production Programs

QUESTIONNAIRES MAILED	QUESTIONNAIRES RETURNED	QUESTIONNAIRES INDICATING EXISTENCE OF PROGRAM	QUESTIONNAIRES INDICATING NO PROGRAM
312	236	130	106

Of the 130 local production programs, 29 were school building programs, 86 were serving an entire school system, and 15 were serving either an open- or closed-circuit educational television station. Figure 2 shows the geographic location of the 130 programs with symbols indicating the type of administrative unit being served. One can readily see that, with the exception of California, a majority of the programs identified were located in the Midwest and East.

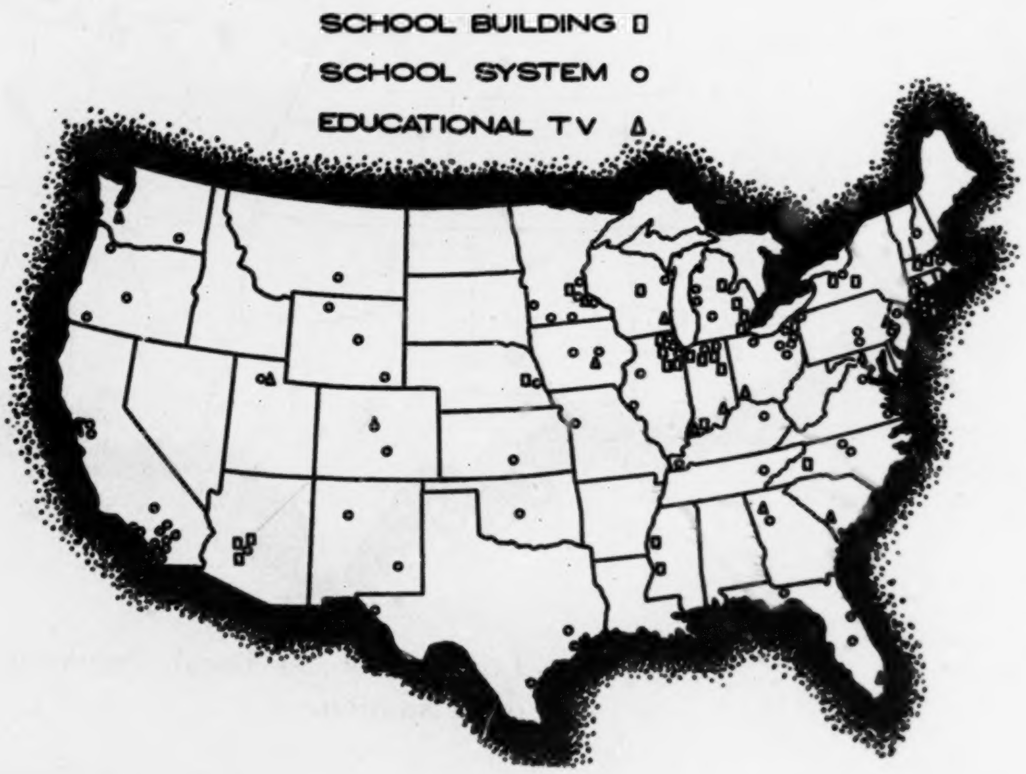


Figure 2. Location of Local Preparation Programs with Type of Administrative Unit Being Served.

After careful analysis, a total of twenty programs was then selected for visitation. The selection of these programs was based primarily on the information contained in the returned questionnaires. However, some attention also was given to obtaining an adequate sample from each of the three types of administrative units being served by the various production programs. The final sample represented six programs serving individual school buildings, nine serving school systems, and five serving educational television stations. Figure 3 indicates, by appropriate symbols, the location of each program visited and the type of administrative arrangement. A detailed description of a number of these programs is included in Chapter III of this publication.

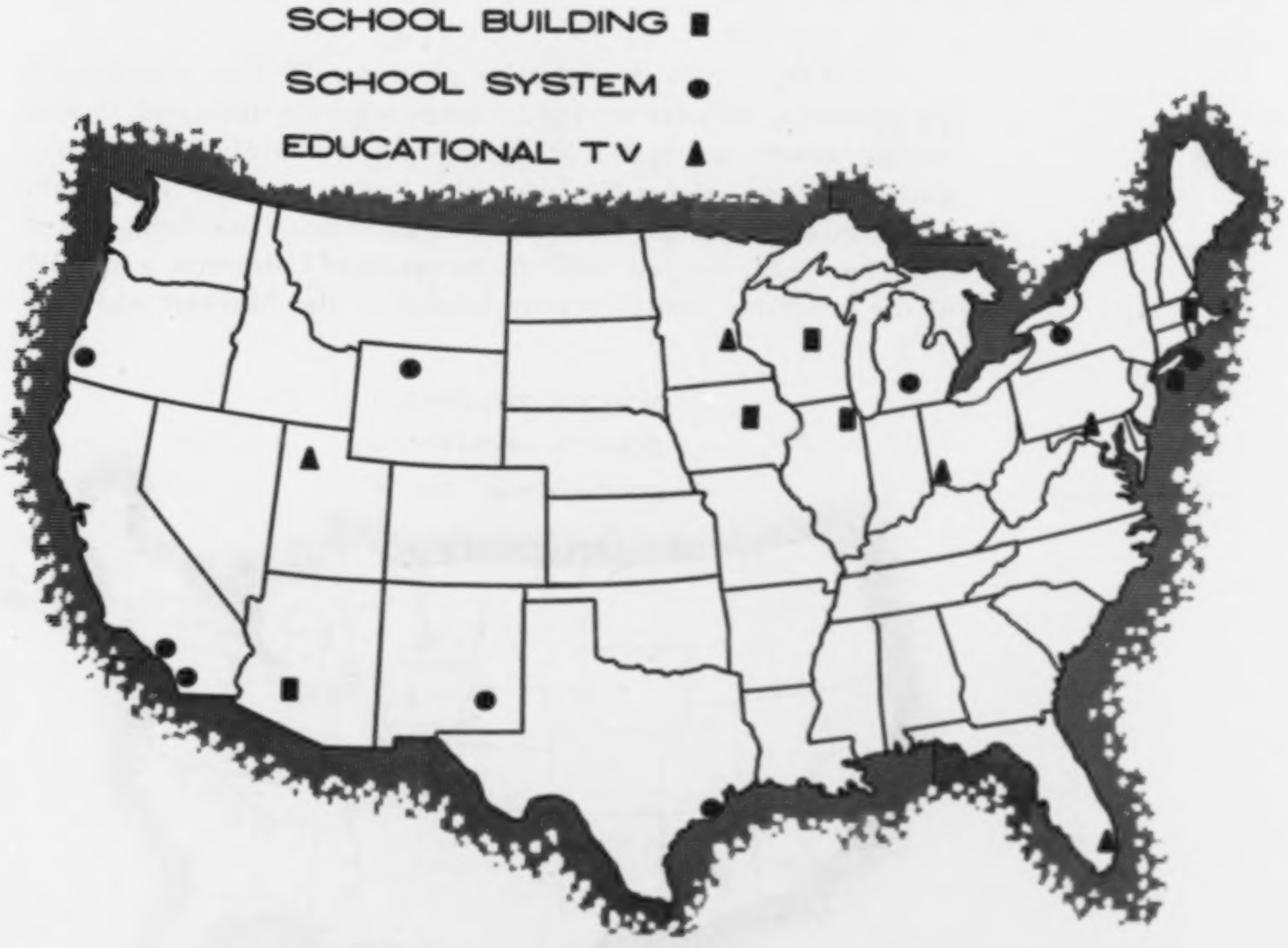


Figure 3. Location of 20 Local Preparation Programs Selected for Visitation.

During the school visitations, information was collected concerning important aspects of each local preparation program. In addition to this objective information, opinions of the audio-visual specialists involved and of a limited number of teachers were solicited.

Interview guides were utilized in collecting this information, and the results are reported in Chapter IV.

RESULTS OF NATIONWIDE QUESTIONNAIRE

As mentioned previously, 130 programs established for the purpose of preparing visual instructional materials were identified as a result of mailing questionnaires to 312 instructional materials specialists. Programs were found in 48 of our 50 states. The following information was gained from analyzing the information contained in the 130 returned questionnaires.

WHO PREPARES MATERIALS IN SCHOOL BUILDING PRODUCTION CENTERS?

One of the first questions concerning the local preparation of visual instructional materials is "Who prepares these materials?" The respondents were asked to indicate, by appropriate numbers, personnel who utilized the preparation facility most extensively. The table below shows a breakdown of the responses to this question by audio-visual specialists in the twenty-nine individual school building programs studied.

Table 2. Responses of School Building Audio-Visual Specialists to "Who Produces Materials in Your Preparation Center?"

PRODUCER	NUMBER OF RESPONSES INDICATING:		
	MOST EXTENSIVE PRODUCER	SECOND MOST EXTENSIVE PRODUCER	THIRD MOST EXTENSIVE PRODUCER
CLASSROOM TEACHERS WITH ASSISTANCE OF THE AUDIO-VISUAL SPECIALIST	14	6	8
AUDIO-VISUAL SPECIALIST IN CONSULTATION WITH THE CLASSROOM TEACHERS	6	9	7
STUDENT ASSISTANTS WORKING UNDER THE SUPERVISION OF THE AUDIO-VISUAL SPECIALIST AND IN CONSULTATION WITH THE CLASSROOM TEACHERS	9	8	4

Table 2 indicates that three classifications of users of the local preparation centers in individual school buildings were identified. Although no great difference existed in the number of times each classification of producer was mentioned, there was some indication that teachers prepared many of their own materials where facilities were available in an individual school building. It is interesting to note also that in twenty-one of the twenty-nine individual building programs studied, student assistants were utilized in the preparation of visual instructional materials. (The term "student assistants" as used here refers to a special group of students who have the responsibility of producing instructional materials. The students are not necessarily members of the class of the teacher for whom the materials are produced. In some instances the students receive academic credit for their work.) In all but one of the reporting schools, classroom teachers were producing materials; the audio-visual specialist was actively participating in the production activities in twenty-two of the twenty-nine schools reporting.

WHO PREPARES MATERIALS IN TELEVISION PRODUCTION CENTERS?

Table 3 contains a summary of responses by coordinators of local preparation centers serving educational television stations. Usable returns were received from fourteen of the fifteen programs surveyed.

Table 3. Responses Indicating Who Produces Visual Materials for Television Teachers

PRODUCER	NUMBER OF RESPONSES INDICATING:		
	MOST EXTENSIVE PRODUCER	SECOND MOST EXTENSIVE PRODUCER	THIRD MOST EXTENSIVE PRODUCER
TELEVISION TEACHER WITH ASSISTANCE OF THE AUDIO-VISUAL SPECIALIST	3	3	
AUDIO-VISUAL SPECIALIST IN CONSULTATION WITH THE TELEVISION TEACHER	1		2
STUDENT ASSISTANTS UNDER THE SUPERVISION OF THE AUDIO-VISUAL SPECIALIST IN CONSULTATION WITH THE TELEVISION TEACHER	1		2
HIRED ARTISTS IN CONSULTATION WITH THE TELEVISION TEACHER	8	3	2
TELEVISION TEACHER		2	
SECRETARY		1	
PHOTOGRAPHER	1		1

The pattern of local production activities for television usually showed the employment of a hired artist. In eight of the fourteen returns, hired artists were listed as the most extensive producers of instructional materials. All but one of the programs reported that hired artists were being utilized in varying degrees to provide the visual instructional materials requested by the television teachers. The only other pattern of production mentioned with any degree of consistency was that of the television teachers producing their own materials with the assistance of an instructional materials coordinator.

WHO PREPARES MATERIALS IN SCHOOL SYSTEM PRODUCTION CENTERS?

In school systems where a centralized local production center served the entire system, the practice seemed to be for the audio-visual specialists to be the major producers of visual instructional materials.

Table 4. Responses by School System Audio-Visual Specialists to "Who Produces Visual Instructional Materials in Your Preparation Center?"

PRODUCER	NUMBER OF RESPONSES INDICATING:		
	MOST EXTENSIVE PRODUCER	SECOND MOST EXTENSIVE PRODUCER	THIRD MOST EXTENSIVE PRODUCER
CLASSROOM TEACHER WITH THE ASSISTANCE OF THE AUDIO-VISUAL SPECIALIST	22	29	5
AUDIO-VISUAL SPECIALIST IN CONSULTATION WITH THE CLASSROOM TEACHERS	38	14	12
STUDENT ASSISTANTS UNDER SUPERVISION OF THE AUDIO-VISUAL SPECIALIST AND IN CONSULTATION WITH THE CLASSROOM TEACHERS	7	7	14
HIRED ARTIST IN CONSULTATION WITH THE TELEVISION TEACHERS	1	1	0
HIRED ARTIST IN CONSULTATION WITH THE CLASSROOM TEACHERS	1	1	1
TELEVISION TEACHER WITH THE ASSISTANCE OF THE AUDIO-VISUAL SPECIALIST	0	4	0
AUDIO-VISUAL SPECIALIST IN COOPERATION WITH THE BUILDING COORDINATORS	1	0	0
SECRETARY IN CONSULTATION WITH THE AUDIO-VISUAL SPECIALIST	1	2	1
SUBJECT MATTER SUPERVISOR	2	0	0
HIRED ARTIST IN COOPERATION WITH THE AUDIO-VISUAL SPECIALIST	6	1	0
AUDIO-VISUAL SPECIALIST IN COOPERATION WITH A CURRICULUM SPECIALIST	3	1	0

Classroom teachers were also frequent users of the facility, although they served in the role of consultant more often than in the role of producer. A number of other production arrangements are noted in Table 4, but the only noteworthy one was that one in which student assistants assumed the production function. Students were being utilized for this type of work to varying degrees in twenty-eight of the eighty-two reporting school systems.

Analysis of responses to the question "Who uses your local preparation center most extensively?" seems to indicate that the type of administrative arrangement is an important influence in determining who the most frequent and extensive users will be. In communities where a preparation center was serving the teachers in an individual school building, the classroom teachers appeared to be the most frequent users with the audio-visual specialist a close second. In preparation centers serving an entire school system, the audio-visual specialist produced the greatest number of visual materials with classroom teachers next. In preparation centers serving educational television stations, hired artists were the major producers of visual instructional materials. It should be noted that in all these three types of programs, the teacher assumed an important role in the preparation of visual instructional materials for his use in the classroom or during televised instruction.

In addition to determining the most extensive users of the local preparation facilities in the three types of administrative

arrangements mentioned above, the researchers were also interested in determining the types of materials being produced and the quantity of production of each type.

MATERIALS PRODUCED IN SCHOOL BUILDING PRODUCTION CENTERS

Table 5. Responses of 29 School Building Audio-Visual Specialists Concerning the Types, Extent, and Producers of Visual Materials in 1959-60

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				NUMBER OF INDIVIDUAL SCHOOLS REPORTING THESE QUANTITIES OF MATERIALS PRODUCED					NUMBER OF INDIVIDUAL SCHOOLS REPORTING EACH ACTIVITY (N-29)
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100	
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC)	22	23	19			4	10	3	11	28
OVERHEAD TRANSPARENCIES 7x7 —10x10	21	13	19		3	2	2	8	10	25
2x2 SLIDES	16	11	15			4	3	5	11	23
MOUNTED PICTURES	17	20	14		1	1	4	7	10	23
EXHIBITS, DIORAMAS AND MURALS	12	13	7		12		2	2	1	17
PHOTOGRAPHS	11	14	10		2			3	12	17
FLANNEL BOARDS	11		7		12	3				15
MODELS	11	10	3		7	3	3	1		14
MOUNTED SPECIMEN	9	8	3		3	4	3		2	12
FLANNEL BOARD MATERIAL SETS	8		8		8	2		1		11
MOTION PICTURES	6	6	7		10					10
3¼x4 SLIDES	5		5		1	3	3	2		9
FILMSTRIPS	2		3		5					5

Table 5 presents information on the extent and types of production as reported by the audio-visual specialists in individual school building preparation centers.

An analysis of Table 5 brings to light some very interesting information concerning the variety of materials prepared in school building local preparation centers in 1959-60. The following statements incorporate some of the more pertinent findings.

1. The types of visual materials produced most frequently were: graphic materials (charts, graphs, etc.), overhead transparencies, mounted pictures, 2 x 2 slides, and photographs. In twenty-eight of the twenty-nine reporting schools, some type of graphic material was being produced.

2. For each of the five types of materials mentioned above, ten or more of the schools reported extensive production.

3. It is interesting to note that filmstrips were produced in five of the twenty-nine programs studied while 16mm films had been made in ten schools. There was no indication that any school produced more than ten films or filmstrips.

4. Listed in rank order, the four most frequently checked types of visual materials produced by *teachers* were: graphic materials, overhead transparencies, mounted pictures, and 2 x 2 slides. The rank order of *student produced* materials was graphic materials, mounted pictures, photographs, and a tie for fourth place between overhead transparencies and exhibits, dioramas, and murals. The four most frequently checked types of visual materials produced by the *audio-visual specialists* were: 2 x 2 slides and photographs (tying for rank 1), overhead transparencies and graphic materials.

5. In one school preparation center more than 100 exhibits, dioramas, and murals were produced and in another between 51 and 100 models were constructed.

MATERIALS PRODUCED IN SCHOOL SYSTEM PRODUCTION CENTERS

Approximately two-thirds of the local preparation centers identified during this study were serving an entire school system.

A total of eighty-four of the eighty-six questionnaires returned from audio-visual specialists in schools with a system-wide production center provided usable information relative to the topic under discussion. Table 6 contains the tabulated data.

Table 6. Responses of 84 School System Audio-Visual Specialists Concerning the Types, Extent, and Producers of Visual Materials in 1959-60

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				NUMBER OF SCHOOL SYSTEMS REPORTING THESE QUANTITIES OF MATERIALS PRODUCED					NUMBER OF SCHOOL SYSTEMS REPORTING EACH ACTIVITY (N-84)
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—12	21—30	51—100	OVER 100	
2 x 2 SLIDES	26	9	61	9	4	4	12	10	41	71
PHOTOGRAPHS	26	18	61	11		6	9	10	43	68
MOUNTED PICTURES	26	21	41	8	3	3	12	9	40	67
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)	37	24	43	13	6	8	13	9	29	65
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	30	12	52	8	2	11	11	6	27	57
FLANNEL BOARDS	47	7	19	2	18	10	11	2	6	47
FLANNEL BOARD MATERIAL SETS	32	5	15	5	10	13	10	8	4	45
MOTION PICTURES	6	4	32	5	32	5	2		1	40
EXHIBITS, DIORAMAS AND MURALS	19	20	15	3	19	3	4	3	7	36
3¼ x 4 SLIDES	12	9	27	2	3	5	11	6	7	32
MOUNTED SPECIMENS	20	17	10	4	11	2	6	3	6	28
MODELS	16	10	15	2	10	8	2	5	3	28
ELECTRIC BOARD	1		1			1				1
MAGNETIC BOARD	1			1	1					1
PLASTIC BOARDS	1		1				1			1
PLASTIC BOARD INSERTS	1		1					1		1

The statements below, which were formulated from the information presented in Table 6, provide some insight into the types of materials produced in school system preparation centers and the extent to which teachers, student assistants, and audio-visual specialists were producing each type of material.

1. The most frequently produced types of visual materials were the same as those produced in the school building preparation centers. Two-by-two slides, however, replaced graphic materials as the type of material most frequently mentioned. Slides were produced in seventy-one of the eighty-four programs studied. Photographs ranked second with sixty-eight centers engaged in this activity.

2. The figures in Table 6 strongly indicate that the audio-visual specialist is the most extensive producer of materials in local preparation centers serving a total school system. This is in contrast to the school building center where no definite pattern emerged. Teachers proved to be the second greatest producers, and student assistants and hired artists were found to be utilizing the centers to a limited extent.

3. Listed in rank order, the four most frequently checked types of visual materials produced by *teachers* were: flannel boards, graphic materials, flannel board materials, and overhead transparencies. The rank order of *student produced* materials was: graphic materials, mounted pictures, exhibits, dioramas and murals, and photographs. *Audio-visual specialists* were checked most frequently as producers of: a tie between 2 x 2 slides and photographs, overhead transparencies, and graphic materials. A few *hired artists* also produced materials in school system production centers. The types of materials produced most frequently by artists were graphic materials, photographs, 2 x 2 slides, and a ties between mounted pictures and overhead transparencies.

4. Preparation of filmstrips, models, and mounted specimens were the activities reported by the fewest number of school systems. In each instance, the activity was reported by twenty-eight audio-visual specialists.

MATERIALS PRODUCED IN TELEVISION PRODUCTION CENTERS

Table 7 presents a summary of the information contained in the thirteen usable questionnaires concerning the types of materials produced, the producers, and the extent of production.

Table 7. Responses Concerning the Types, Extent, and Producers of Visual Materials for 13 Educational Television Stations

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				NUMBER OF TELEVISION PRODUCTION CENTERS REPORTING THESE QUANTITIES OF MATERIALS PRODUCED					NUMBER OF TELEVISION PRODUCTION CENTERS REPORTING EACH ACTIVITY (N-13)
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1–10	11–20	21–50	51–100	OVER 100	
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC)	6	1	1	10		1	3	3	6	13
PHOTOGRAPHS	4		5	1			3	1	6	10
MOUNTED PICTURES	4	2	1	8			2	1	7	10
MODELS	5	1	1	6	3	2	3	1	1	10
EXHIBITS, DIORAMAS AND MURALS	5	2		8	2	4	1		2	9
2 x 2 SLIDES	2		6	2				3	6	9
OVERHEAD TRANSPARENCIES 7 x 7 — 10 x 10	4	1	4	3		2	2	2	3	9
FLANNEL BOARD	5		1	2	4	1		2		7
MOUNTED SPECIMENS	3		1	1	1	2	3			6
MOTION PICTURES	3		3	1	4	1			1	6
3¼ x 4 SLIDES	3		4	1			3	1	2	6
FLANNEL BOARD MATERIAL SETS	4	1	1	2	1	3	1			5
FILMSTRIPS			1	2	2	1				3

If we realize the limitations inherent in a small sample, it might be worth-while to note that the thirteen local preparation programs being studied represented a very high percentage of the total population in 1959-60. Therefore, the information presented in Table 7 should accurately represent the types and extent of visual production undertaken during 1959-60 by television stations which had a facility for producing visual materials for television teachers. The comments below incorporate some of the important findings.

1. Photographs, graphic materials, mounted pictures, overhead transparencies, and 2 x 2 slides again appeared in the group of heavily produced materials; however, two other activities must be included in the list for television use. The other two areas are (1) models and (2) exhibits, dioramas, and murals.

2. Visual instructional materials used for television purposes were frequently produced by hired artists. Although hired artists

produced a limited number of items in the school system programs studied, they assumed a more prominent role in centers serving television teachers.

3. Television teachers frequently produced their own visual instructional materials; in fact, television teachers engaged in all activities listed in the table with the exception of film or filmstrip production.

4. Graphic materials were being produced at thirteen stations while filmstrips were prepared in only three programs.

5. Perhaps the most encouraging item in Table 7 is the report that one center prepared more than one hundred filmclips during the 1959-60 school year while another made more than one hundred videotape recordings.

Conclusions Concerning the Producers of Materials

Some general conclusions can be drawn from the information presented in Tables 5, 6, and 7. The information in all three tables pertains to the various types and extent of visual materials produced and the personnel that produced them. The analysis of the data was performed by the type of administrative arrangement served. The following conclusions seem valid in light of the data gathered.

1. The most frequently produced materials in local preparation centers were 2 x 2 slides, graphic materials (charts and graphs), photographs, mounted pictures, and overhead transparencies.

2. Classroom teachers received considerable help from student assistants and audio-visual specialists in the preparation of visual instructional materials; however, the teachers spent considerable time and energy in the conceptualization and/or preparation of the visual materials they desired.

3. Hired artists were providing many visual instructional materials for television teachers, but this concept of production had not gained acceptance in the regular school structure.

4. Once a local preparation center was established, a wide variety of materials was produced. This was true regardless of the type of clientele served. There seemed to be no indication of a preference for photographic or nonphotographic materials.

PRODUCTION EQUIPMENT AND MATERIALS

For a local preparation center to function satisfactorily there must be adequate equipment and materials available. The next consideration, then, concerns the equipment and materials which were available for use by the persons engaged in production activities in the programs studied. Again the questionnaire returns were categorized in accordance with the three types of administrative units used previously. The information in Table 8 provides some insight into the answer to the question mentioned above. Since

Table 8. Percentage of Schools with Materials and Equipment Utilized for Local Preparation of Visual Materials

PRODUCTION ACTIVITY	SCHOOL BUILDING PROGRAMS	SCHOOL SYSTEM PROGRAMS	TV PROGRAMS	OVERALL PROGRAMS
*MOUNTING				
DRY MOUNTING PRESS	76	70	77	72
LAMINATING EQUIPMENT	31	37	31	35
MOUNTING CLOTH (MUSLIN OR CHARTEX)	38	33	8	31
MATERIALS FOR FRAMING WITH TAPE	34	36	46	37
MATERIALS FOR 3-D MATERIALS	17	22	46	23
*COLORING				
AIR BRUSH	10	21	31	19
COMMERCIAL ADHESIVE MATERIALS	34	45	62	45
PLASTIC INKS	38	50	46	47
OTHER INKS	100	86	100	90
SLIDE CRAYONS	52	64	69	62
TEMPERA	0	5	8	4
WATER COLORS	3	3	0	3
*LETTERING				
MECHANICAL LETTERING DEVICES	59	56	69	58
CUT-OUT LETTERS	48	42	39	42
FELT-POINT PENS	79	84	100	84
RUBBER STAMP	28	45	23	39
PRIMARY TYPEWRITER	28	55	62	49
STENCIL	62	65	77	66
PASTE-UP LETTERS	7	5	23	7
EMBOSSOGRAPH	0	1	15	2
*REPRODUCTION				
REFLEX COPY	31	29	8	27
OTHER COPY PROCESSES	55	56	62	56
MIMEOGRAPH	79	70	100	75
DITTO	86	70	69	70
DIAZO	62	49	46	48
SILK SCREEN	24	21	15	21
MULTILITH	0	13	8	9
LINE-O-SCRIBE	0	1	15	2
XEROX	0	2	0	1
*PHOTOGRAPHY				
35MM CAMERA	66	87	77	80
4X5 CAMERA	41	62	62	57
ENLARGER	62	62	69	63
POLAROID	48	56	69	55
DARKROOM	62	65	77	66
COPY EQUIPMENT	55	62	85	63
16MM CAMERA	10	20	15	17
2¼X2¼ CAMERA	7	8	0	7
FILMSTRIP CAMERA	0	5	8	4

the number of schools in each of the three categories being utilized was different, the results are presented in percentages in order to enable the reader to make comparisons of the extent to which equipment and materials are provided in each type of school unit.

The production equipment and materials available in the programs surveyed did not vary to any great extent, regardless of the type of administrative unit being served. The overall pattern that emerged, therefore, provides a basis for determining what appear to be the essential materials and equipment for a local production program. On the basis that any item available in 50 per cent of the schools surveyed is an important element of a production program, the production materials and equipment listed in Table 9 would be recommended should one be initiating or expanding a local production program.

Table 9. Recommended Production Equipment and Materials for a Minimal Program

MOUNTING
- DRY MOUNTING PRESS
- DRY MOUNTING TISSUE

COLORING
- SLIDE CRAYONS
- INKS OF VARIOUS KIND

LETTERING
- FELT-POINT PENS
- STENCILS
- MECHANICAL LETTERING

PHOTOGRAPHY
- 35mm. CAMERA
- ENLARGER
- DARKROOM
- COPY EQUIPMENT
- 4x5 CAMERA
- POLAROID CAMERA

REPRODUCTION
- COPY PROCESSES
- MIMEOGRAPH DUPLICATION
- SPIRIT DUPLICATION

The information in Table 8 is rather encouraging in terms of the equipment and materials available for the local preparation of visual instructional materials. Even with this somewhat optimistic picture, there is considerable evidence to support the position that teachers do not utilize the local preparation facility as extensively

DETERRENTS TO THE USE OF PRODUCTION CENTERS

as one might expect. The researchers, interested in finding out the reasons for this situation, asked the audio-visual specialists to indicate what they recognized as major deterrents to greater use of the preparation facility. The respondents were asked to note the deterrents with a "1" representing the greatest deterrent, "2" the second greatest, and "3" the third most prevalent. These responses were then weighted, all "1" responses receiving three points, all "2" responses given two points, and all "3" responses receiving one point. The results of this analysis are shown in Table 10, with both rank and total points for each item listed. These findings have again been categorized according to the administrative units referred to previously.

Table 10. Responses and Rankings Indicating the Greatest Deterrents to Expanded Use of Local Production Facilities

DETERRENTS	SCHOOL BUILDING PRODUCTION PROGRAM		SCHOOL SYSTEM PRODUCTION PROGRAM		TELEVISION PRODUCTION PROGRAM		OVERALL RATING	
	WEIGHTED RESPONSES	RANK	WEIGHTED RESPONSES	RANK	WEIGHTED RESPONSES	RANK	WEIGHTED RESPONSES	RANK
▶ LACK OF TIME	49	1	139	1	22	1	210	1
▶ LACK OF SPACE	17	3	69	2	11	2	97	2
▶ LACK OF SUPERVISORY TIME	16	4	41	3	1	10	58	3
▶ LACK OF IN-SERVICE EDUCATION	21	2	27	5.5	3	6.5	51	4
▶ LACK OF EQUIPMENT	5	8	37	4	6	4.5	48	5
▶ LACK OF INTEREST	11	6	27	5.5	2	8	40	6
▶ LACK OF KNOWLEDGE	14	5	18	7	7	3	39	7
▶ LACK OF ADMINISTRATIVE SUPPORT	1	11	17	8	1	10	19	8
▶ LACK OF PRODUCTION PERSONNEL	4	9	7	10	6	4.5	17	9
▶ LACK OF BUDGET	6	7	6	11	3	6.5	15	10.5
▶ LACK OF MATERIALS	2	10	12	9	1	10	15	10.5

As is readily apparent, lack of time to prepare visual instructional materials was reported as the primary deterrent to greater production activity, with lack of space also an important but less serious drawback. Lack of capable production personnel appeared to be somewhat of a problem for schools with television instruction, but this area presented no particular problem for the other two units. Similarly, lack of in-service training in production techniques was reported as a more important drawback to greater use of the production facility by supervisors of school building centers than by supervisors of school system or television production centers.

TIMES WHEN PRODUCTION CENTERS ARE USED

Noting that lack of time was reported far more frequently than any other deterrent to expanded use of local production centers, one might wonder when such facilities are used by various classes of personnel. Anticipating that such information might prove valuable, the writers included a statement in the questionnaire asking respondents to place in rank order the times when the facilities were used most extensively. The responses were weighted with the time of greater use receiving three points; second greatest use, two points; and third greatest use, one point. The results of this tabulation are presented in Table 11.

Table 11. Weighted Responses and Rankings Indicating Times when Preparation Centers are Used Most Extensively

TIMES WHEN PREPARATION FACILITY IS USED	SCHOOL BUILDING PRODUCTION PROGRAM		SCHOOL SYSTEM PRODUCTION PROGRAM		TELEVISION PRODUCTION PROGRAM		OVERALL RATING	
	WEIGHTED RESPONSES	RANK	WEIGHTED RESPONSES	RANK	WEIGHTED RESPONSES	RANK	WEIGHTED RESPONSES	RANK
► REGULAR SCHOOL HOURS	76	1	125	2	28	1	[illegible]	1
► AFTER SCHOOL	46	2	136	1	14	2	[illegible]	2
► PRESCHOOL	16	3	20	3	1	3	37	3
► NOON	12	4	8	4			20	4
► SUMMER	1	5	5	5.5			6	5
► WEEKENDS			5	5.5			5	6

As noted in Table 11, the local production facilities in the schools surveyed were utilized most extensively during regular hours and after school. Very little difference was noted in the extent of use during these two periods. Sporadic use was made of the facilities before school, at noon, on weekends, and during the summer.

GENERAL CONCLUSIONS RESULTING FROM A NATIONWIDE SURVEY OF LOCAL PRODUCTION PROGRAMS.

1

Although the concept of formally organized programs in public schools is relatively new, 130 such programs were identified during the course of this study. Sixty-six per cent of these were system-wide production centers, 22 per cent were individual school building centers, and 12 per cent were programs associated with educational television stations.

2

The type of school unit being served by a local production program is an important factor in determining who will be the most frequent users of the facility. In situations where a production center served an individual school building, classroom teachers were the major utilizers of the facilities; audio-visual specialists were the most extensive users of production centers serving entire school systems, while hired artists assumed this role in local production centers associated with educational television stations.

3

The most frequently produced visual instructional materials for classroom or television use were 2 x 2 slides, photographs, graphic materials, mounted pictures, and overhead transparencies.

4

A majority of the local production programs identified had sufficient equipment and materials to produce a wide variety of visual instructional materials.

5

Lack of time to produce instructional materials was the greatest deterrent to an expanded use of local production centers. Other important deterrents were lack of space and lack of supervisory time for the audio-visual specialist.

6

Local production centers were utilized most extensively during regular school hours and after school.

CHAPTER III

CASE STUDIES OF OUTSTANDING PROGRAMS

CASE STUDIES OF OUTSTANDING PROGRAMS

The twenty local preparation programs visited during the course of this study had certain unique or outstanding features. To say that one program was much better than another would be a questionable statement; therefore, the task of deciding which programs to describe in detail was not an easy one. The writers, primarily guided by the purposes of the publication and the audiences to be served, selected four system-wide centers, three individual school building centers, and three television production centers for detailed study. Unique features of other selected programs are also described.

PRODUCTION PROGRAMS SERVING SCHOOL SYSTEMS

The Powell Public Schools, Powell, Wyoming; the Battle Creek Public Schools, Battle Creek, Michigan; the Jackson County School System, Medford, Oregon; and the Penfield Central Schools, Penfield, New York, were considered by the writers to be model programs and are described in detail below.

POWELL PUBLIC SCHOOLS
POWELL, WYOMING

*
POWELL PUBLIC SCHOOLS
POWELL, WYOMING

Progress from school in a borrowed reclamation building in 1909 to a school system with six modern buildings, the latest being a $1,500,000 high school building, is the half-century growth story of the school system of Powell, Wyoming. During the 1959-60 school year in excess of 2100 children were being accommodated in these up-to-date facilities. Guiding the growth of the children were 65 elementary teachers and 42 secondary teachers, plus an administrative staff dedicated to the task of providing the best learning environment possible for both students and teachers.

Consistent with their basic philosophy of continual improvement of the total learning environment within their school system, the Powell school officials initiated a local preparation program in 1957. From an inconspicuous beginning in that year, this phase of the Powell audio-visual program has grown by leaps and bounds under the very capable direction of Mr. Delmar Somer. Today the local preparation facilities, along with other phases of the total audio-visual program, are located in the ultra-modern $1,500,000 high school.

Supervision of the Preparation Program

Mr. Somer is a full-time audio-visual director. Although he assumes the responsibility for the total audio-visual program, Somer spends approximately 35 per cent of his time engaged in activities directly related to the preparation of visual materials.

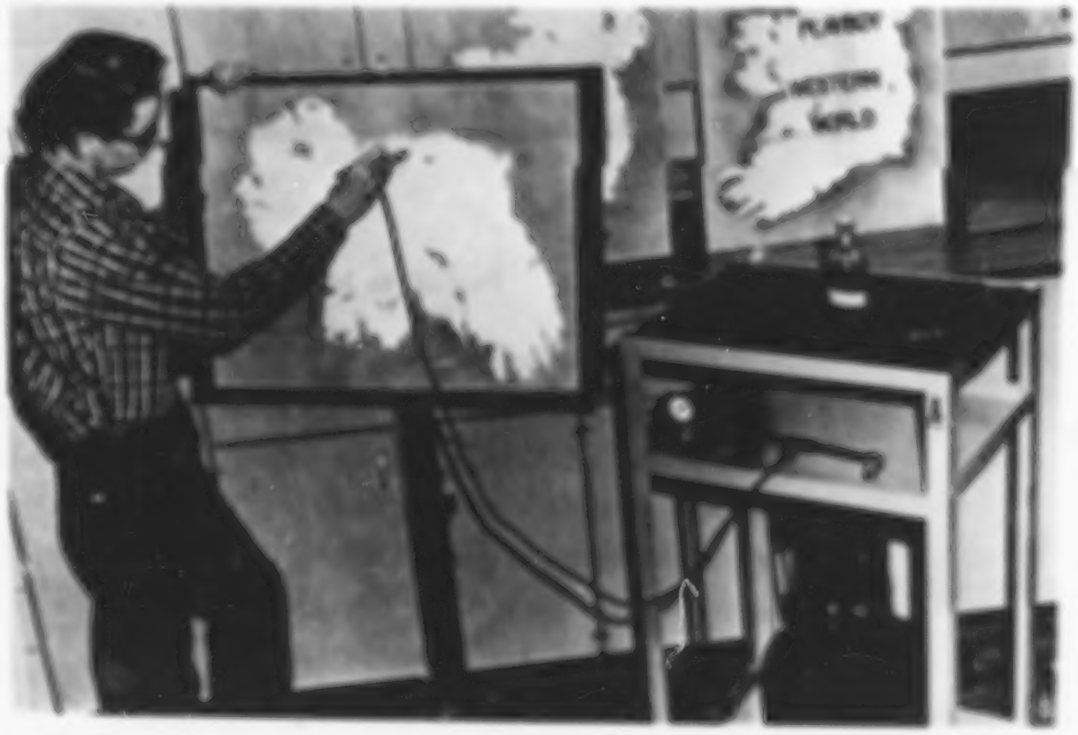
In addition to appointing a full-time audio-visual director, the administrators of the school have taken a personal interest in the audio-visual program, with the result that a very favorable climate exists in Powell for the development and expansion of the local preparation program.

Production and Utilization of Materials

Numerous individuals working alone or in groups have become involved in the production of materials in the Powell Local Preparation Center. Listed below, but not necessarily in order of importance, are some of the more extensive users of the facilities:

1. Classroom teachers at all grade levels.
2. High school students enrolled in a photography class.
3. Audio-visual student assistants working under the supervision of the audio-visual director and in consultation with classroom teachers. Most of these students have successfully completed the requirements of the photography class mentioned above.
4. Audio-visual director.

The groups listed above not only use the local preparation facilities for the preparation of instructional materials for classroom use, but also produce many types of co-curricular materials. For example, all of the pictures for the school annual are prepared by personnel working in the Center. Many posters advertising school activities are also prepared there. School administrators recognize the value of locally produced materials for public relations purposes and consequently utilize many materials prepared locally.



The table below gives some indication of the scope and extent of materials prepared in the Powell Local Production Center during the 1959-60 school year. The producers of the various types of visual materials are also indicated.

Table 12. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Local Production Center of Powell, Wyoming

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES	✓		✓						✓
PHOTOGRAPHS	✓	✓	✓						✓
MOUNTED PICTURES	✓	✓	✓						✓
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)	✓	✓	✓						✓
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓		✓					✓	
FLANNEL BOARDS	✓					✓			
FLANNEL BOARD MATERIAL SETS	✓						✓		
MOTION PICTURES			✓				✓		
EXHIBITS, DIORAMAS AND MURALS	✓	✓	✓			✓			
3¼ x 4 SLIDES	✓							✓	
MOUNTED SPECIMENS	✓	✓	✓			✓			
MODELS		✓				✓			
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

Production Materials and Equipment

Few public school faculties are fortunate enough to have the wealth of materials and equipment for the local preparation of visual materials that exists in the Powell Audio-Visual Center. One can substantiate this statement by checking in the table below the items that have been provided by the Powell school board and citizens for use by students, teachers, and administrators in the preparation of both curricular and co-curricular materials.

MOUNTING

✓ DRY MOUNTING PRESS
✓ LAMINATING EQUIPMENT
✓ MOUNTING CLOTH (MUSLIN OR CHARTEX)
✓ MATERIALS FOR FRAMING WITH TAPE
— MOUNTING FOR 3-D MATERIALS

LETTERING

✓ MECHANICAL LETTERING DEVICES
✓ CUT-OUT LETTERS
✓ FELT-POINT PEN
✓ RUBBER STAMP
— PRIMARY TYPEWRITER
✓ STENCIL
✓ PASTE-UP LETTERS
— EMBOSSOGRAPH

COLORING

✓ AIR BRUSH
✓ COMMERCIAL ADHESIVE MATERIALS
✓ PLASTIC INKS
✓ OTHER INKS
✓ SLIDE CRAYONS
✓ TEMPERA
✓ WATER COLORS

PHOTOGRAPHY

✓ 35mm CAMERA
✓ 4x5 CAMERA
✓ ENLARGER
✓ POLAROID
✓ DARKROOM
✓ COPY EQUIPMENT
✓ 16mm CAMERA
— 2¼ x 2¼ CAMERA
— FILMSTRIP CAMERA

REPRODUCTION

✓ REFLEX COPY
— OTHER COPY PROCESSES
✓ MIMEOGRAPH
✓ DITTO
✓ DIAZO
— SILK SCREEN
— MULTILITH
— LINE-O-SCRIBE
— XEROX

In-Service Education

Because the facilities available were limited prior to moving into the new high school building the in-service education program in audio-visual production was necessarily limited. With the addition of the new facilities, however, an extensive in-service program has been initiated for both students and teachers.

At the present time all student assistants working in the local preparation program are required to participate in an in-service program conducted by the audio-visual specialist and other students. As mentioned previously, many of the student assistants receive their training by completing the requirements of the photography class taught by the audio-visual director. It is interesting to note that the photography course is an elective course sanctioned by the school officials. Consequently, students enrolling in the course not only prepare themselves for participation in the student assistant program but also accumulate credit toward graduation.

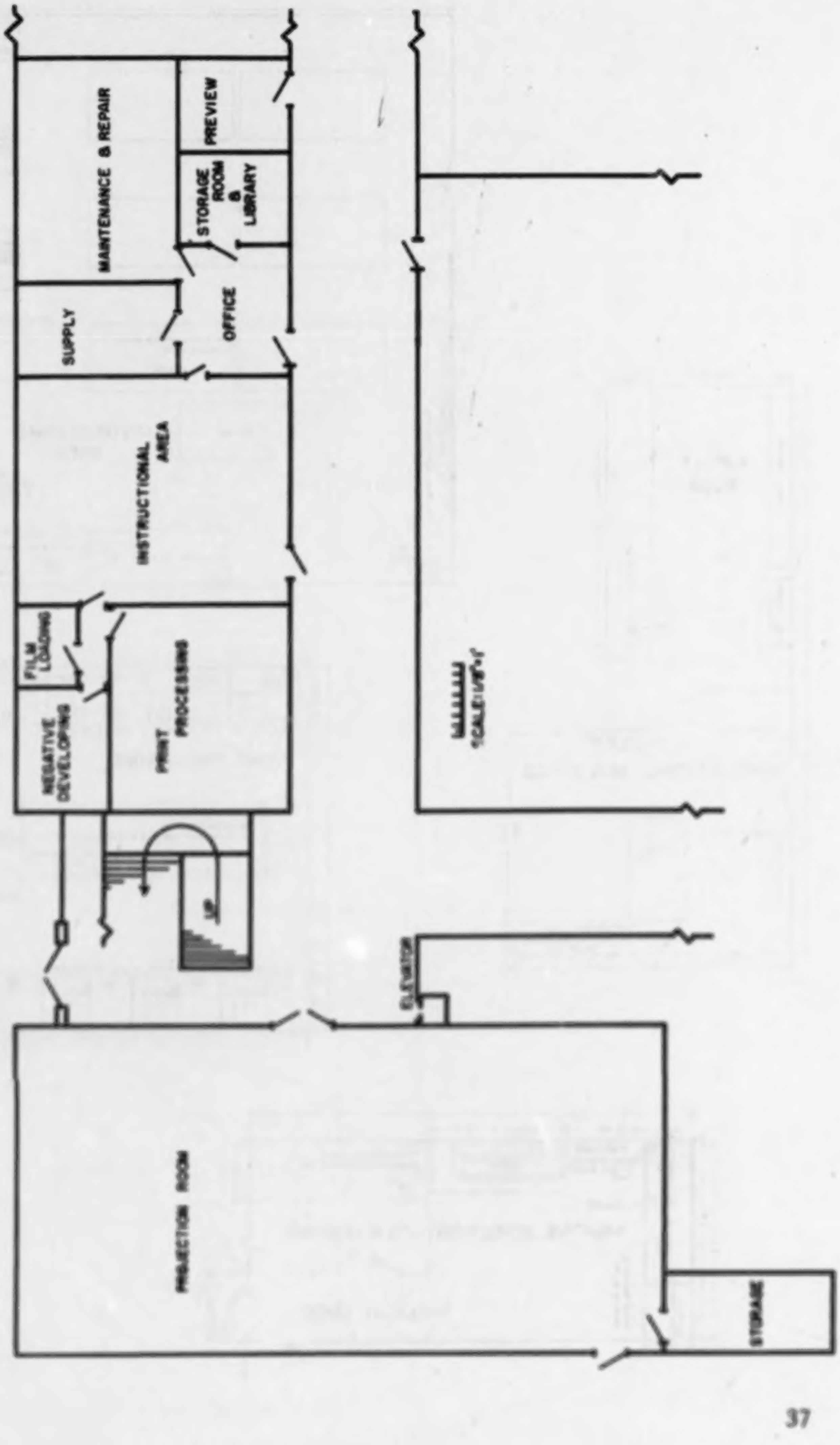
Approximately 25 per cent of the Powell teachers in 1960 had participated in a local preparation workshop of some type conducted by the audio-visual director. These workshops are a continuing enterprise and are normally conducted after school hours on a voluntary basis. In addition to these on-going workshops, teachers are free to come to the audio-visual center at any time for personal help in developing the competencies necessary to produce their own visual instructional materials.

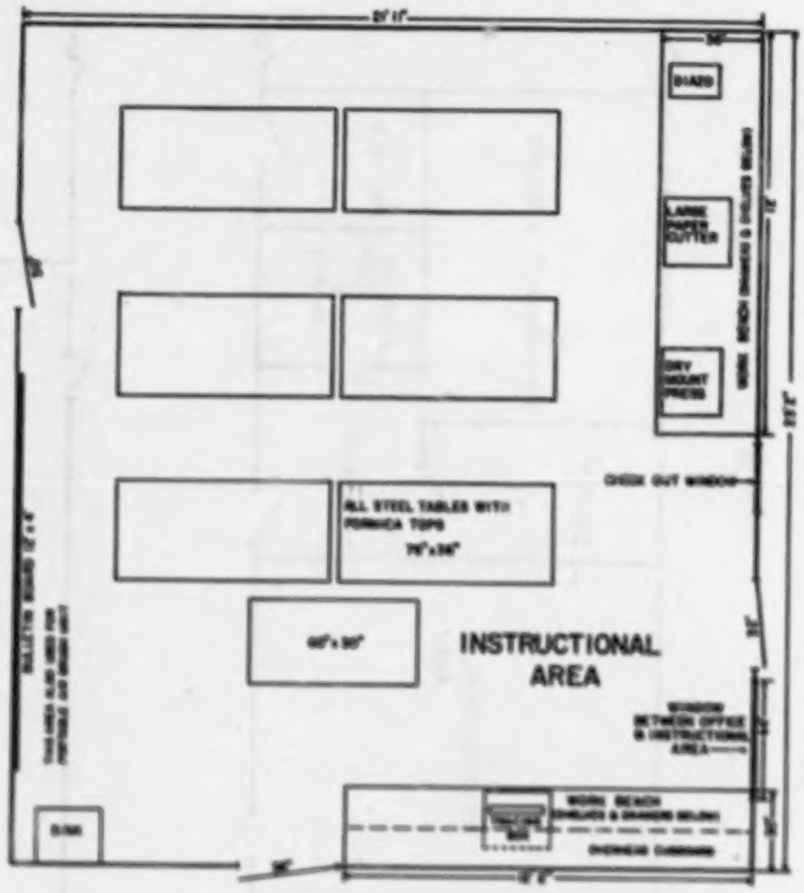
Funds

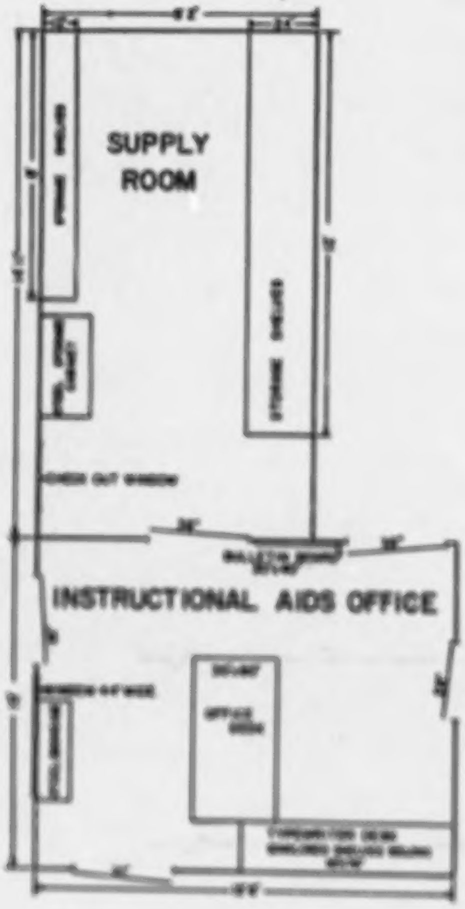
As one might suspect from the preceding discussion, financial support for the Powell local preparation program presents no great barrier. During the 1959-60 school year approximately $18 a teacher was spent for the operation of the local preparation program. All of these funds came from tax revenue. Additional allocations for the operation of the program are made available as new needs arise.

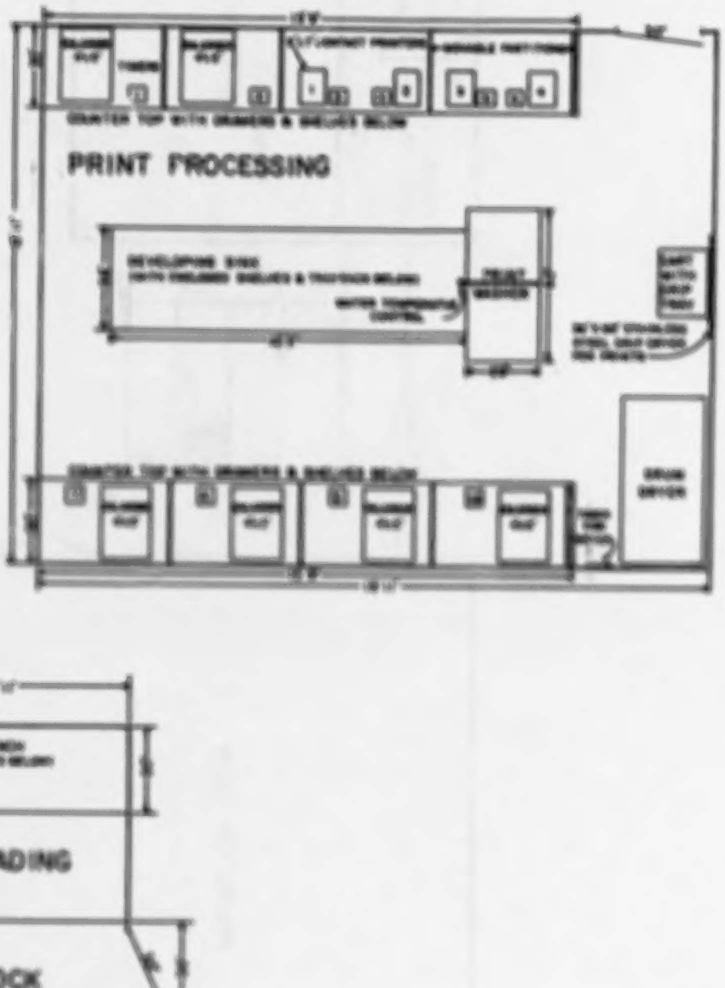
Facilities

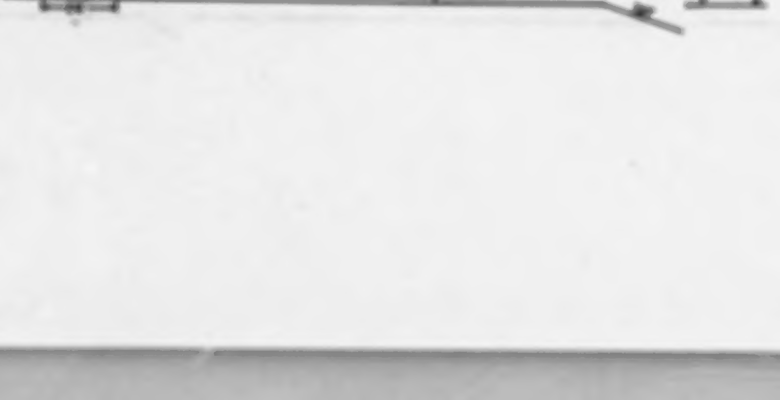
Few, if any, public schools have facilities for the preparation of visual instructional materials comparable to those in Powell. The following diagrams show the facilities which are used directly or indirectly in support of the local preparation program.


MAINTENANCE & REPAIR
PREVIEW
STORAGE ROOM & LIBRARY
SUPPLY
OFFICE
INSTRUCTIONAL AREA
FILM LOADING
PRINT PROCESSING
NEGATIVE DEVELOPING
SCALE:1/8"=1'
UP
ELEVATOR
PROJECTION ROOM
STORAGE


DIAZO
LARGE PAPER CUTTER
DRY MOUNT PRESS
CHECK OUT WINDOW
ALL STEEL TABLES WITH FORMICA TOPS
INSTRUCTIONAL AREA
WINDOW BETWEEN OFFICE & INSTRUCTIONAL AREA
WORK BENCH
OVERHEAD CUPBOARD
SINK
BULLETIN BOARD


SUPPLY ROOM
STORAGE SHELVES
CHECK OUT WINDOW
BULLETIN BOARD
INSTRUCTIONAL AIDS OFFICE
OFFICE DESK
TYPEWRITER DESK


COUNTER TOP WITH DRAWERS & SHELVES BELOW
PRINT PROCESSING
DEVELOPING SINK
WATER TEMPERATURE CONTROL
PRINT WASHER
DRUM DRYER
COUNTER TOP WITH DRAWERS & SHELVES BELOW


WATER TEMP CONTROL
FILM WASHER
FILM UNLOADING BENCH
FILM LOADING BENCH
NEGATIVE DEVELOPING
FILM LOADING
LIGHT LOCK

The story of the Powell School System's local preparation program is an exciting one and is accurately depicted by the following statement, which appears in one of the school's public relations pamphlets: "Truly, educational leadership in Wyoming and the Rocky Mountain area has become the trademark of the Powell community."

SCIENCE MEANS TO YOU

BATTLE CREEK PUBLIC SCHOOLS
BATTLE CREEK, MICHIGAN

BATTLE CREEK PUBLIC SCHOOLS
BATTLE CREEK, MICHIGAN
*

General Description of School System

The public school system of Battle Creek, Michigan, has for many years been developing both in size and in excellence of their instructional program. During 1960-61 a teaching staff of 495 professional educators served more than 11,000 student enrolled in fifteen elementary schools, four junior high schools, and one senior high school.

To the authors, the most outstanding characteristic of this program seemed to be the in-service education program, of which audio-visual workshops appeared to be an important integrating activity.

Initiation of the Preparation Program

Operating under the philosophy that in-service education should be based on the felt needs of teachers, principals, and other curriculum persons, the Audio-Visual Center in 1948 started preparation activities to help teachers produce instructional materials which they desired to use in their teaching and could not obtain commercially.

In-Service Training Activities

Marie McMahan,* full-time, city-wide, audio-visual consultant, devoted a portion of her time to informing teachers how to produce these needed teaching materials and then worked with them in the actual production. The several types of in-service production activities included:

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* Miss McMahan has since left the Battle Creek School System and is presently Assistant Professor at Western Michigan University, Kalamazoo, Michigan.

1. Meetings with audio-visual building coordinators, who in turn passed on production skills to teachers in their buildings.

2. Building staff meetings where the possibilities of local production were demonstrated to the entire faculty upon request.

3. Departmental or grade-level meetings where production possibilities were explored in relation to specific units of work.

4. Individual teacher conferences where teachers received personal advice and/or assistance in developing desired teaching materials. Many of these conferences took place during regularly scheduled visits to each of the buildings by the audio-visual specialist.

5. Workshops where earned credits satisfied requirements for annual pay increments. Some of these were conducted cooperatively with a university and regular college credits obtained. Others were set up by the school system with time requirements the same as for university classes and for which an equivalent amount of "local" credit was given.

Each year a two weeks', pre-school workshop is given at Clear Lake, the school's camp. One section is on *Production and Utilization of Instructional Materials*. During this workshop the teachers produce audio-visual materials which they want to take back and use in their classrooms the coming year.

From time to time Miss McMahan works with the curriculum specialists to conduct an *Instructional Materials Workshop*. Initially, teachers indicate areas in which they need help. The curriculum specialist then presents basic principles important to the improvement of teaching in these designated areas, and the audio-visual specialist illustrates ways in which audio-visual materials can be produced and utilized to help in carrying out these principles or methods. Finally, with the help of the audio-visual specialist, the teachers prepare those materials they think are needed to improve their instruction.

The Audio-Visual Center has no preparation specialists other than Miss McMahan. Therefore, to fulfill the many teacher requests for special visual materials, she periodically conducts an advanced *Production Workshop* where teachers who have completed basic workshop courses and acquired production skills agree to prepare audio-visual materials for system-wide use. The participants receive credit toward salary increments; and the flannel boards, plastic maps, transparencies, models, and other locally produced materials are catalogued and made accessible for use by any teacher in the schools.

Here is a summary of the 1960-61 in-service training meetings, many of which were concerned partly or entirely with local production of A-V teaching materials:

- ▶ 37 workshop sessions
- ▶ 8 meetings with building audio-visual coordinators
- ▶ 3 open house sessions for new teachers
- ▶ 7 grade-level meetings
- ▶ 5 meetings with junior high departmental groups

- ▶ 13 building staff meetings

Individual conferences with about 200 teachers each month

A number of preview sessions

The chart on the next page shows the kinds and amounts of instructional materials which were prepared as a result of these many workshops and the individual efforts of the teachers.

Table 13. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Local Production Center of Battle Creek, Michigan

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES	✓		✓						✓
PHOTOGRAPHS	✓		✓						✓
MOUNTED PICTURES	✓								✓
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)	✓	✓	✓						✓
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓	✓	✓						✓
FLANNEL BOARDS	✓		✓					✓	
FLANNEL BOARD MATERIAL SETS	✓	✓	✓					✓	
MOTION PICTURES									
EXHIBITS, DIORAMAS AND MURALS	✓	✓	✓						✓
3¼ x 4 SLIDES		✓						✓	
MOUNTED SPECIMENS		✓							✓
MODELS	✓	✓	✓						✓
ELECTRIC BOARD	✓		✓				✓		
MAGNETIC BOARD									
PLASTIC BOARDS	✓		✓				✓		
PLASTIC BOARD INSERTS	✓		✓					✓	

Through the combined efforts of the classroom teachers, audio-visual coordinators, assistant superintendent, art supervisor, and the audio-visual specialist a very useful in-service booklet has been developed. *Audio-Visual Ideas—Let's Try Them*[1] includes sections on audio-visual materials for teaching reading, arithmetic, social science, health and safety, and music, and provides directions for making flannel boards, bulletin boards, relief maps, dioramas, electric boards, and other audio-visual devices described in the first section of the book.

To facilitate teacher awareness of the availability of locally produced materials from the Audio-Visual Aids Department, Miss McMahan prepared a catalogue which is sent to all teachers.

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[1] Ahlschwede, B.F. and McMahan, M., *Audio-Visual Ideas—Let's Try Them,* 192 pp.

These materials are categorized by grade and topic and presently include flannel board materials, plastic-covered maps, electric boards and electric board inserts, models, and overhead transparencies.

Production Equipment and Materials

The administrators of the Battle Creek schools have provided the following materials and equipment for use by teachers in preparing needed teaching materials:

MOUNTING

- ✓ DRY MOUNTING PRESS
- ✓ LAMINATING EQUIPMENT
- ✓ MOUNTING CLOTH (MUSLIN OR CHARTEX)
- ✓ MATERIALS FOR FRAMING WITH TAPE
- ✓ MOUNTING FOR 3-D MATERIALS

LETTERING

- ✓ MECHANICAL LETTERING DEVICES
- ✓ CUT-OUT LETTERS
- ✓ FELT-POINT PEN
- ✓ RUBBER STAMP
- ✓ PRIMARY TYPEWRITER
- ✓ STENCIL
- ✓ PASTE-UP LETTERS
- — EMBOSSOGRAPH

COLORING

- — AIR BRUSH
- ✓ COMMERCIAL ADHESIVE MATERIALS
- ✓ PLASTIC INKS
- ✓ OTHER INKS
- ✓ SLIDE CRAYONS
- ✓ TEMPERA
- ✓ WATER COLORS

PHOTOGRAPHY

- ✓ 35mm CAMERA
- ✓ 4x5 CAMERA
- ✓ ENLARGER
- ✓ POLAROID
- ✓ DARKROOM
- ✓ COPY EQUIPMENT
- ✓ 16mm CAMERA
- ✓ 2¼ x 2¼ CAMERA
- — FILMSTRIP CAMERA

REPRODUCTION

- ✓ REFLEX COPY
- ✓ OTHER COPY PROCESSES
- ✓ MIMEOGRAPH
- ✓ DITTO
- ✓ DIAZO
- — SILK SCREEN
- — MULTILITH
- — LINE-O-SCRIBE
- — XEROX

"Are we going to have an audio-visual workshop this fall?" "May I attend the audio-visual workshop again this year? There are so many things I want to make for my classroom."

Perhaps these gratifying questions keep occurring year after year because this school system bases its in-service activities on specific principles learned through experience.

Marie McMahan summarizes them like this:

➔ 1. In-service education should be based on the felt need of teachers, principals, and other curriculum persons.

➔ 2. It should start where teachers are and take them as far as possible.

➔ 3. Teachers should be involved as much as possible in the planning of such in-service education.

➔ 4. They should be given as many opportunities as possible to share the effective techniques and materials they have discovered.

➔ 5. In-service education should take into consideration the time available to teachers and, whenever possible, should tie into already scheduled meetings.

The in-service education program in Battle Creek, Michigan, provides actual evidence that many teachers desire to make some of their own visual instructional materials, and, if given the needed help, materials, and facilities, can produce and use them effectively.

JACKSON COUNTY SCHOOL SYSTEM
MEDFORD, OREGON

JACKSON COUNTY
SCHOOL SYSTEM
MEDFORD, OREGON
*

General Description of the School

The Jackson County School System consists of eleven school districts. These districts are composed of thirty-four elementary schools, five junior high schools, and eight senior high schools. The student enrollment during the 1961-62 school year was approximately 12,699 in grades 1-8, and 4,889 in grades 9-12. A staff of 841 administrators, supervisors, and teachers is employed to operate the school system. The county school superintendent's office is located in the courthouse in Medford, Oregon. The director of the Curriculum Materials Center also has his office and workrooms in the courthouse. The facilities available for the operation of the Curriculum Materials Center in 1960 were certainly well above the average when compared with those in similar centers throughout the country. A recent expansion program, however, has approximately doubled the original Curriculum Materials Center area, and now the Center has become an outstanding one of its kind in the country. Approximately one-third of the area reserved for the operation of the Curriculum Center is utilized for the local preparation of instructional materials.

Supervision of the Preparation Program

Mr. Jim McDonald, Director of the Curriculum Materials Center, supervises the local preparation program as a part of his regular work load. Mr. McDonald works within a favorable administrative environment, as the Jackson County Superintendent of Schools, Mr. Alf B. Mekvold, is an enthusiastic supporter of the total curriculum materials program. The superintendent's support has had a direct influence on the growth and expansion of the Center. This team, working hand in hand, provides a most effective type of educational leadership.

The Jackson County Curriculum Materials Center is well equipped for extensive local production activities. The information presented below gives some indication of the wide variety of equipment and materials available for use.

MOUNTING

- ✓ DRY MOUNTING PRESS
- ✓ LAMINATING EQUIPMENT
- ✓ MOUNTING CLOTH (MUSLIN OR CHARTEX)
- ✓ MATERIALS FOR FRAMING WITH TAPE
- ✓ MOUNTING FOR 3-D MATERIALS

LETTERING

- ✓ MECHANICAL LETTERING DEVICES
- ✓ CUT-OUT LETTERS
- ✓ FELT-POINT PEN
- ✓ RUBBER STAMP
- ✓ PRIMARY TYPEWRITER
- ✓ STENCIL
- ✓ PASTE-UP LETTERS
- — EMBOSSOGRAPH

COLORING

- ✓ AIR BRUSH
- ✓ COMMERCIAL ADHESIVE MATERIALS
- ✓ PLASTIC INKS
- ✓ OTHER INKS
- ✓ SLIDE CRAYONS
- ✓ TEMPERA
- ✓ WATER COLORS

PHOTOGRAPHY

- ✓ 35mm CAMERA
- ✓ 4x5 CAMERA
- ✓ ENLARGER
- ✓ POLAROID
- ✓ DARKROOM
- ✓ COPY EQUIPMENT
- — 16mm CAMERA
- ✓ 2¼ x 2¼ CAMERA
- ✓ FILMSTRIP CAMERA

REPRODUCTION

- ✓ REFLEX COPY
- ✓ OTHER COPY PROCESSES
- ✓ MIMEOGRAPH
- ✓ DITTO
- ✓ DIAZO
- — SILK SCREEN
- ✓ MULTILITH
- — LINE-O-SCRIBE
- — XEROX

The staff of the Curriculum Materials Center consists of seven full-time persons. Six of these engage, to a limited extent, in local preparation activities. Each individual is somewhat proficient in all of the production activities performed in the Center; however, each individual has specialized in one particular aspect of the production program and has high competencies in that area. One person is employed full time doing multilith offset printing.

The major portion of the instructional materials prepared in the Center is prepared by the Center staff. Individual teachers are free to utilize the facilities of the Center to prepare their own materials, although most of the teachers interviewed prefer to have the materials prepared for them. Instructional materials are also prepared by the Center staff as a result of requests from curriculum committees. The director of the program anticipates a tremendous growth in the number of requests for locally produced materials from such committees.

A master file of materials produced in the Center has been set up. As this file grows, the masters will be catalogued and information concerning the available masters will be disseminated to all teachers in the school system. All of the materials prepared in the Center by the Center staff are available for teacher use although the materials remain the property of the school system.

The figure on the next page indicates the variety of materials produced in the Center during the 1959-60 school year.

Table 14. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Local Production Center of Jackson County, Oregon

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES	✓		✓						✓
PHOTOGRAPHS	✓		✓						✓
MOUNTED PICTURES			✓						✓
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)			✓	✓					✓
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓		✓						✓
FLANNEL BOARDS			✓					✓	
FLANNEL BOARD MATERIAL SETS									
MOTION PICTURES									
EXHIBITS, DIORAMAS AND MURALS			✓						✓
3¼ x 4 SLIDES	✓		✓						✓
MOUNTED SPECIMENS			✓						✓
MODELS									
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

In-Service Education

A continuous in-service education program is conducted by the curriculum materials department. The in-service program has three major aspects. These are: (1) A two-hour, pre-school session is devoted to orienting all returning teachers to the services of the department. (2) All new staff members are required to attend a one-day, pre-school workshop that orients them to the services of the Center. (3) During the school year some rather unique displays and demonstrations are utilized to explain the uses and purposes of instructional materials. The director of the Center, with limited help, visits the various schools in the county, presents the demonstrations, and sets up the displays.

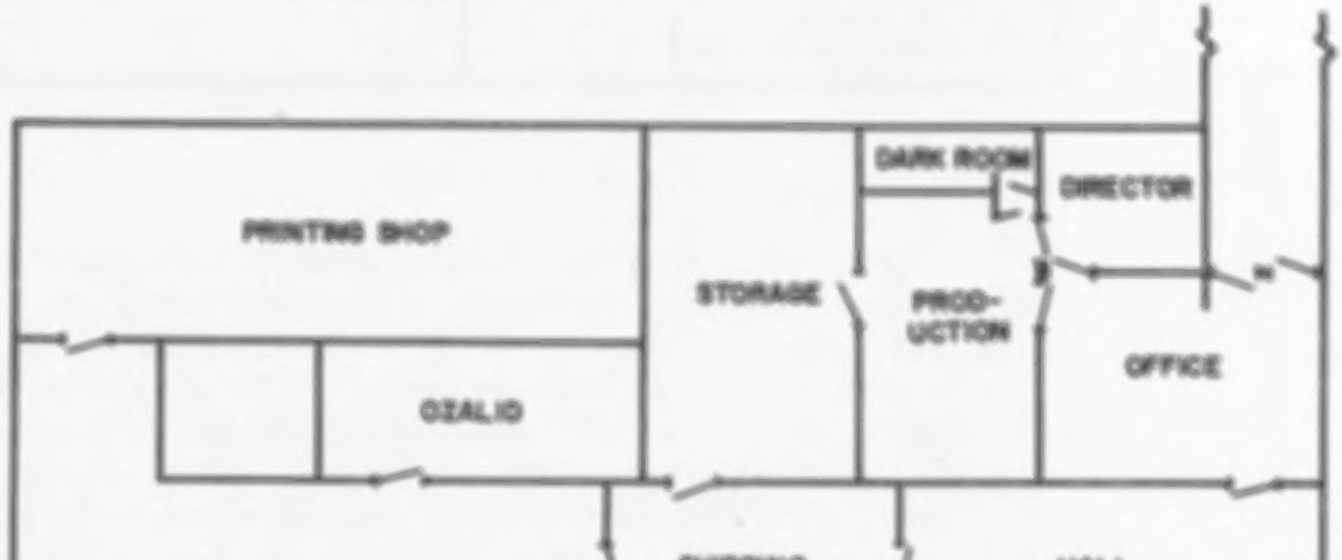
Although the in-service program as outlined above orients teachers concerning the total instructional materials program, heavy emphasis is placed on the uses and possibilities of locally produced instructional materials. The tremendous traffic in and out of the Curriculum Materials Center speaks well for the approach to in-service education mentioned above. Starting January, 1962, the Center will offer audio-visual classes to teachers of the county in three major areas: (1) selection and evaluation, (2) utilization, and (3) production of materials. The course will be taught by the Center's director, using staff members from the Center for selected phases of the course. The course will run ten weeks, meeting at nights in the Center. Teachers attending will receive professional growth credit from their respective districts. The course will be offered three times during the year, two courses running concurrently.

Funds

All funds to support this program come from the tax dollar. Approximately $3.50 a teacher was spent for the operation of the local preparation program during the 1959-60 school year. This current year, 1961-62, the production budget for each teacher approximates $11.50 a teacher.

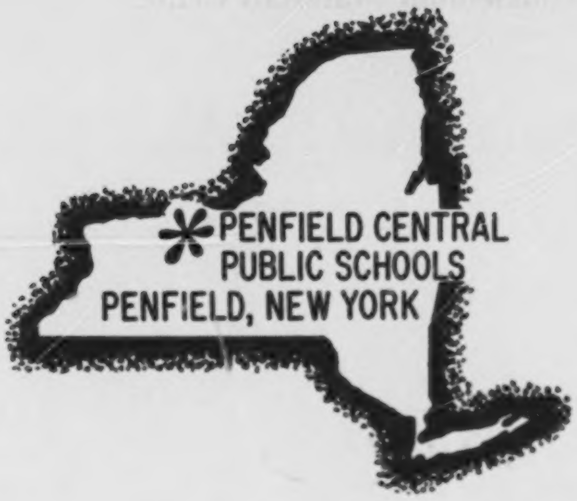
Facilities

Approximately 4500 square feet of floor space has been allocated for the operation of the Jackson County Curriculum Materials Center. The drawing below indicates how this area is being utilized.


DARK ROOM
DIRECTOR
PRINTING SHOP
STORAGE
PROD-
UCTION
OFFICE
OZALID
SHIPPING
HALL
REPAIR
PRE-
VIEW
SOUND
ROOM
DEMONSTRATION
AREA
TAPE
SCALE 1/8"=1'

The success of most endeavors, regardless of the area of concern, is directly related to the energy and enthusiasm of those in charge of the program. There could be no better example of this theory being put into operation than the one depicted by those in charge of the Jackson County Curriculum Materials Center.

PENFIELD CENTRAL SCHOOLS
PENFIELD, NEW YORK



In *Portrait of an Education,* the professional educators who make up the Penfield Central School staff express their philosophy of education as follows:

"This we believe—that each student must learn to think for himself and must be able to communicate effectively his ideas to others. We strive to place the student in this position of dual responsibility and to teach him judgment and discrimination in his responses. The coin of individuality has two sides, and along with self-expression and initiative come self-discipline and social responsibility. Only with a parallel development can our young people achieve fully-realized roles in their families and in the local, national, and international communities of tomorrow."[2]

In an attempt to carry out this philosophy, Penfield has developed one of the better school systems in New York State in terms of both faculty and facilities.

The 1960-61 physical facilities, consisting of four elementary schools, one junior high school, and one senior high school, housed 3700 students and are some of the most modern structures in western New York.

The staff of 205 teachers has access to a wealth of instructional materials and facilities. Each elementary school and the junior high school have a library, a cafeteria, an auditorium, a gymnasium and athletic fields, a health suite, foreign language facilities, and audio-visual facilities and equipment.

The instructional facilities in the new Penfield Senior High School are perhaps most outstanding. They include a spacious and well-stocked library, a 1500-capacity dual gymnasium, an ultra-modern audio-visual suite (which serves as a district audio-visual center), a specially equipped art room, a full homemaking suite, a daylight-capped Olympic swimming pool, an industrial arts department, special music rooms, an entire building wing for science lecture rooms and laboratories, and language laboratories. Extensive playgrounds and athletic fields have been provided.

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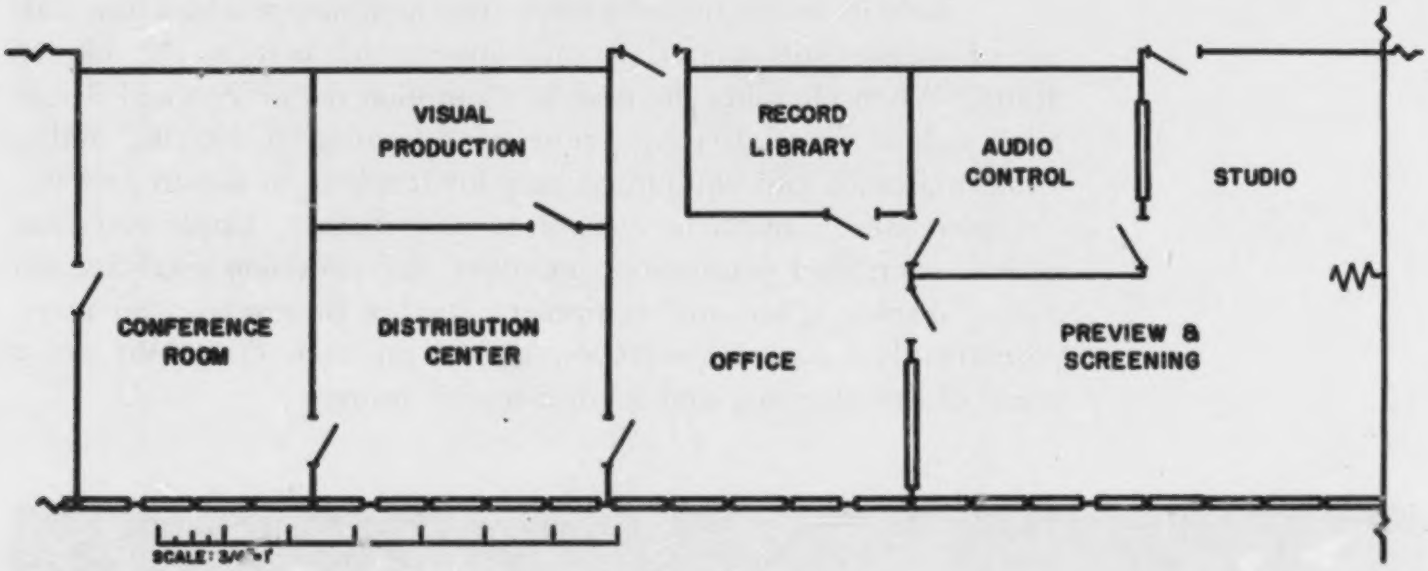
[2] Penfield Central Schools, *Portrait of an Education,* p. 1.

Audio-Visual Facilities a Prime Building Consideration

Both in scope and efficiency, the facilities provided for staff use of audio-visual materials rate among the best in the United States. When planning the new $2.85 million dollar Penfield Senior High School, officials gave prime consideration to making audio-visual materials and equipment easy for teachers to obtain and use. Complete and convenient control of illumination, ample electrical outlets, controlled ventilation, provisions for television conduits, adequate display space and equipment storage provisions, and large, permanently-mounted projection screens in each classroom are a result of pre-planning and administrative support.

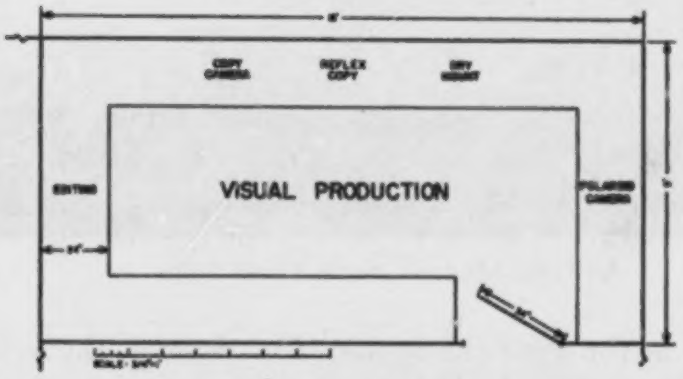
An Ultra-Modern Audio-Visual Suite

Located in the Penfield Senior High School, the audio-visual suite serves both as the Audio-Visual Center for the high school teachers and as the District Audio-Visual Center. Most of the instructional materials are stored here. A school driver makes daily trips to other schools, bringing orders from teachers for films and filmstrips and delivering and returning these materials. The Center's first floor location, with a nearby door leading to the parking lot, makes it convenient for the elementary and junior high teachers to come and use the production facilities for preparing needed visual teaching materials. The floor plan below shows the physical arrangement of the Center. Next to it and occupying equal floor space is the school library, in which some eighty students may work at one time.


VISUAL PRODUCTION
RECORD LIBRARY
AUDIO CONTROL
STUDIO
CONFERENCE ROOM
DISTRIBUTION CENTER
OFFICE
PREVIEW & SCREENING

Facilities for Production of Visual Materials

Facilities for local preparation of visual instructional materials became available in 1958. Although the visual production room indicated in the diagram is not large, it contains the necessary


COPY CAMERA
REFLEX COPY
DRY MOUNT
EDITING
VISUAL PRODUCTION
POLAROID CAMERA

materials and equipment to: (1) prepare transparencies for the overhead projector from maps, charts, etc.; (2) photograph and mount slides; (3) shoot and edit motion picture films; and (4) make office copies of documents, reports, and other printed material.

The table below gives a more complete listing of the equipment available for local preparation of instructional materials.

MOUNTING

✓ DRY MOUNTING PRESS
✓ LAMINATING EQUIPMENT
— MOUNTING CLOTH (MUSLIN OR CHARTEX)
✓ MATERIALS FOR FRAMING WITH TAPE
— MOUNTING FOR 3-D MATERIALS

LETTERING

— MECHANICAL LETTERING DEVICES
— CUT-OUT LETTERS
— FELT-POINT PEN
✓ RUBBER STAMP
— PRIMARY TYPEWRITER
— STENCIL
— PASTE-UP LETTERS
— EMBOSSOGRAPH

COLORING

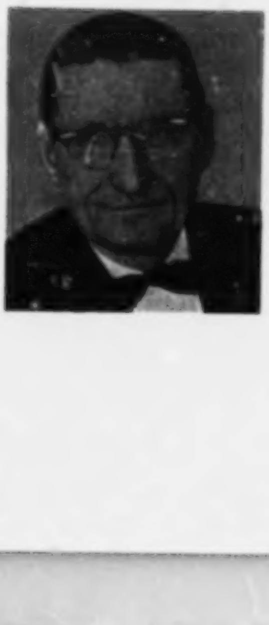
— AIR BRUSH
— COMMERCIAL ADHESIVE MATERIALS
✓ PLASTIC INKS
— OTHER INKS
✓ SLIDE CRAYONS
— TEMPERA
— WATER COLORS

PHOTOGRAPHY

✓ 35mm CAMERA
✓ 4x5 CAMERA
✓ ENLARGER
✓ POLAROID
✓ DARKROOM
✓ COPY EQUIPMENT
✓ 16mm CAMERA
— 2 ¼ x 2 ¼ CAMERA
— FILMSTRIP CAMERA

REPRODUCTION

✓ REFLEX COPY
✓ OTHER COPY PROCESSES
— MIMEOGRAPH
— DITTO
— DIAZO
— SILK SCREEN
— MULTILITH
— LINE-O-SCRIBE
— XEROX



As Mr. Meagher, Coordinator of Audio-Visual Instructional Materials, describes the photographic equipment: "There is a picture in-a-minute camera, a precision 35mm camera for making color slides, and a 16mm motion picture camera that can perform such varied tasks as recording the action of a football game for Monday's quarterbacks or producing public relations and teaching films." A photographic darkroom with facilities for film development and enlarging is shared with the science department.

Approximately $1,098 was budgeted for the operation of the local production program for 1959-60.

The production equipment, materials, and opportunity for personal assistance in preparing visual materials have only recently been provided in the Penfield Schools. Evidence that the teachers have been quick to take advantage of these facilities is shown by the kinds and amounts of visual materials produced during 1959-60.

Table 15. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Local Production Center of Penfield, New York

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES			✓						✓
PHOTOGRAPHS									
MOUNTED PICTURES		✓	✓						✓
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)									
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓	✓	✓						✓
FLANNEL BOARDS	✓							✓	
FLANNEL BOARD MATERIAL SETS									
MOTION PICTURES			✓		✓				
EXHIBITS, DIORAMAS AND MURALS									
3¼ x 4 SLIDES									
MOUNTED SPECIMENS									
MODELS									
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

Interest in producing slide sets, charts, graphs, and even short motion pictures for use in class presentations has caught on among Penfield teachers and students.

Mr. Meagher's philosophy is reflected by his statement: "The essence of audio-visual success is in keeping it simple. A teacher won't use A-V materials if it's difficult for her to study or obtain them."

He has set up his program of assistance in local production of visual instructional materials accordingly. Instead of attempting instruction in local preparation on a group basis, Mr. Meagher prefers to deal individually with teachers. When they come to him wanting a visual to help solve an instructional problem, he will either help them produce it, produce it for them, or occasionally direct student assistants as they perform the actual production work.

Recently this personal assistance in the production of needed visual materials has begun to take a considerable amount of the audio-visual specialist's time. Mr. Meagher is, therefore, recommending the addition of a graphic art specialist to provide even better service to teachers in this area.

After interviewing teachers who were the most extensive users of locally developed instructional materials and seeing the creativity and ingenuity evident in these visuals, one is not surprised to learn that the Penfield administrators are enthusiastic about the possibilities of newer educational media, particularly those which the teachers develop themselves.

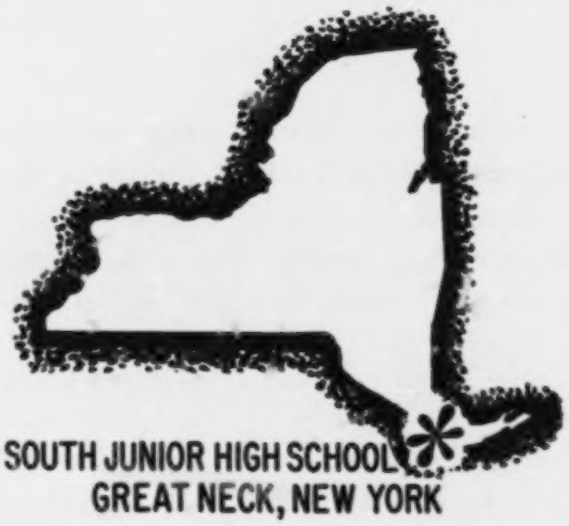
Mr. Elmer F. Peck, District Principal of Penfield Central Schools, comments: "Our teachers realize the many values involved in using audio-visual techniques and materials in their teaching. Our administrators and our Board of Education believe this also.

"With the vast amount of learning facing all students, we know we can do a better job of helping them by using audio-visual practices in our teaching."

PRODUCTION PROGRAMS SERVING A SCHOOL BUILDING

The South Junior High School, Great Neck, New York; the Wayland High School, Wayland, Massachusetts; and the Malcolm Price Laboratory School, Cedar Falls, Iowa, were selected by the writers as being outstanding examples of production programs serving individual school buildings.

SOUTH JUNIOR HIGH SCHOOL GREAT NECK, NEW YORK



General Description of School

The school district of Great Neck is located on Long Island and is one of the highest per capita income areas on the Island. This favorable financial environment, however, has not provided the schools with unlimited funds with which to operate. The school clientele expects nothing less than a dollar's worth of quality education for every dollar spent.

The school patrons are willing to provide generous financial and personal support for those phases of the school program that in some way make a valuable contribution to the education of their children. This type of school-parent relationship has resulted in an outstanding school system. In fact, it is not unusual for families to move from other New York communities to Great Neck for the expressed purpose of enrolling their children in the Great Neck School System.

It is within this school-community environment that South Junior High School functions. South Junior High is one of the fifteen schools in the Great Neck School System—eleven elementary schools, two senior high schools, and one other junior high. Although all of the secondary schools in the system have highly efficient local production programs, the one at South Junior High was selected for detailed treatment in this study because of its outstanding contribution to the instructional program at that school.

Approximately 1400 students were enrolled in South Junior High during the 1961-62 school year. Some eighty-five faculty members devoted their full energies to the education of these 1400 students, and one of the most highly respected faculty members in the school was the Coordinator of Audio-Visual Services, Mr. Siergiej.

Supervision of the Preparation Program

The Great Neck School System has a director of audio-visual services for the entire system plus *full-time* audio-visual coordinators in each of the junior and senior high schools. The eleven elementary schools have full-time librarians who also serve as the audio-visual contact person in their building.

At South Junior High School, the full-time coordinator spends approximately 25 per cent of his regular work day in the supervision and administration of the local preparation program. Support for this program is also provided from the office of the director of audio-visual services. In addition to the ten hours a week of regular school time devoted to local production, the coordinator of the program at South Junior High spends many hours before and after school providing production services for the faculty. Mr. Siergiej's willingness to follow such a demanding schedule has been an important factor in the development of South Junior High's local preparation program.

Equipment and Materials

The table on the next page indicates the different types of production materials and equipment utilized at South Junior High School. The items checked are not merely available but are in constant use by faculty members and students.

MOUNTING

✓ DRY MOUNTING PRESS
✓ LAMINATING EQUIPMENT
___ MOUNTING CLOTH (MUSLIN OR CHARTEX)
___ MATERIALS FOR FRAMING WITH TAPE
___ MOUNTING FOR 3-D MATERIALS

LETTERING

✓ MECHANICAL LETTERING DEVICES
✓ CUT-OUT LETTERS
✓ FELT-POINT PEN
___ RUBBER STAMP
___ PRIMARY TYPEWRITER
✓ STENCIL
✓ PASTE-UP LETTERS
___ EMBOSSOGRAPH

COLORING

___ AIR BRUSH
✓ COMMERCIAL ADHESIVE MATERIALS
✓ PLASTIC INKS
✓ OTHER INKS
✓ SLIDE CRAYONS
___ TEMPERA
___ WATER COLORS

PHOTOGRAPHY

✓ 35mm CAMERA
✓ 4x5 CAMERA
✓ ENLARGER
✓ POLAROID
✓ DARKROOM
✓ COPY EQUIPMENT
___ 16mm CAMERA
✓ 2 ¼ x 2 ¼ CAMERA
___ FILMSTRIP CAMERA

REPRODUCTION

✓ REFLEX COPY
✓ OTHER COPY PROCESSES
✓ MIMEOGRAPH
___ DITTO
✓ DIAZO
___ SILK SCREEN
___ MULTILITH
___ LINE-O-SCRIBE
___ XEROX

Production and Utilization of Materials

South Junior High has more than 100 audio-visual student assistants, a fact somewhat contrary to the common belief that a school with high academic requirements will have few students engaged in the operation of an audio-visual program. Approximately ten of these students are actively engaged in the production of visual instructional materials for classroom use. In addition to the student assistants, teachers engage in production activities to a limited extent. Teachers, however, do spend considerable time conceptualizing the desired visuals , and once conceptualized the visuals are usually prepared by the audio-visual coordinator or student assistants. The table below provides insight into the extent of production work at South Junior High.

Table 16. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Great Neck South Junior High School Local Production Center

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES	✓	✓	✓						✓
PHOTOGRAPHS		✓							✓
MOUNTED PICTURES		✓							✓
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)									
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓	✓	✓					✓	
FLANNEL BOARDS									
FLANNEL BOARD MATERIAL SETS									
MOTION PICTURES									
EXHIBITS, DIORAMAS AND MURALS									
3¼ x 4 SLIDES		✓	✓				✓		
MOUNTED SPECIMENS									
MODELS									
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

As noted on the table above, the production facilities at South Junior High are utilized to produce a limited variety of visual materials; however, those materials produced are made in great numbers. The present tendency to produce extensively in a limited number of areas will probably give way in the near future to a program of extensive production of many types of visual materials. Such a program will certainly be realized if Mr. Siergiej remains in Great Neck to provide the leadership required to consummate the change.

In-Service Program

There are several different approaches utilized at South Junior High School in conducting in-service education programs for teachers and students. The most important and probably most effective in-service activity is the one-to-one work program conducted by the coordinator. Rather than having large group in-service programs, Mr. Siergiej attempts to work individually with those teachers who show an interest in the preparation of visual instructional materials. This type of program is one of the resulting benefits from having a full-time audio-visual coordinator.

Another aspect of the in-service program is a Long Island cooperative venture. All of the audio-visual coordinators in Great Neck are active members of the Long Island Audio-Visual Council. Each year various members of the Council volunteer to visit schools throughout the Island to conduct in-service programs. This cooperative in-service venture has been a very successful one, not only for Great Neck, but for most Long Island schools.

Teachers are also encouraged to attend workshops conducted by commercial enterprises. The most frequently attended workshop is the one conducted by Tecnifax. Substitute teachers are employed, at no expense to the regular teacher, during the time the regular teachers are engaged in the workshop. A number of Great Neck teachers have availed themselves of this excellent opportunity to expand their knowledge concerning locally produced materials.

The varied in-service activities conducted for the teachers of South Junior High have enabled most of them to become well informed concerning the possibilities of local production. This additional training has resulted in an extremely active local production program.

An extensive in-service program is also conducted by the audio-visual coordinator for the student assistants. The time devoted to this activity has paid off for Mr. Siergiej in the development of his program.

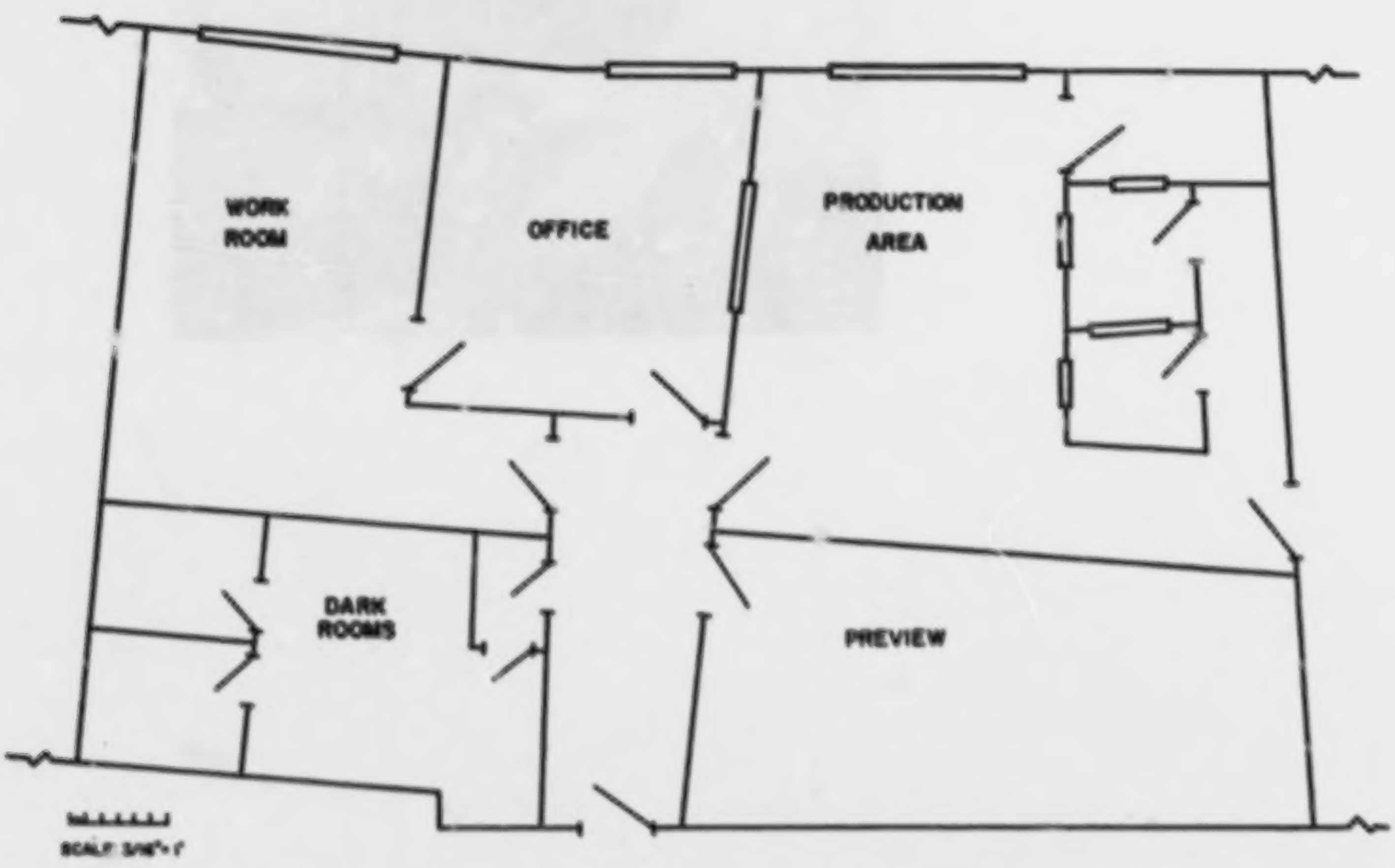
Funds

As mentioned earlier, Great Neck is a rather wealthy community but school funds are not allocated for unnecessary things. Once a program's contribution to the total educational effort is established, adequate funds are provided to enable the program to function at a high level of efficiency. This is the story of the Great

Neck local preparation program. All necessary funds are provided from the tax dollar, and additional dollars will be forthcoming as the need arises.

Facilities

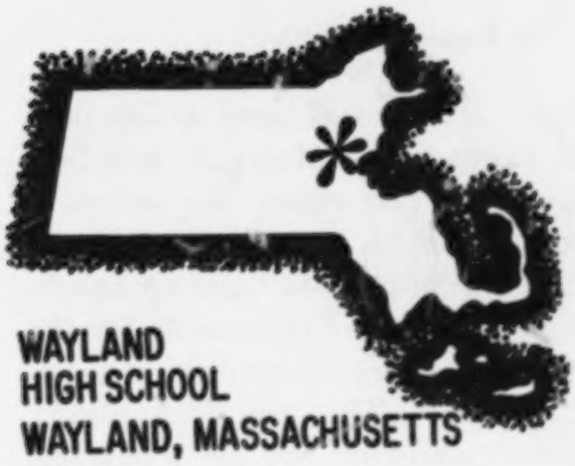
Excellent facilities are available at South Junior High School for the operation of the local preparation program. Although not as elaborate as some *school system* local production centers, the facilities at South Junior High rank with the best when compared to other *school building* programs. A floor plan of the facilities is presented below.



The Great Neck Schools could easily serve as a model to illustrate the type of audio-visual program that can be developed when adequate supervision, materials, equipment, and facilities are provided. At South Junior High the audio-visual coordinator has become one of the more important contributors to every classroom learning environment. A typical day will find approximately one-third of the instructional staff calling upon the services of the audio-visual department. A great number of these calls pertain to the local production or utilization of some type of visual instructional materials. The faculty members of South Junior High School in

Great Neck are enthusiastic supporters of their *full-time* audio-visual coordinator and would rebel at any attempt to decrease the time he devotes to the job of making their teaching more effective.

WAYLAND SENIOR HIGH SCHOOL
WAYLAND, MASSACHUSETTS



General Description of School

The Wayland Senior High School is a pioneering four year high school, both in physical plant design and in its dedication to trying new methods and organizational approaches. Because of its unique as well as functional design, the Educational Facilities Laboratories, Inc., presented in *Profiles of Significant Schools, Wayland Senior High School, Wayland, Massachusetts,*[3] a detailed explanation as to why the school was designed as it was and how it was planned and built.

This school appears to be one of the outstanding examples of team teaching. Successful experiences gained by the Wayland staff while experimenting with various team-teaching patterns involving large and small group instruction served as a basis for many of the suggestions presented in *Images of the Future,*[4] the forward-looking report of the National Association of Secondary School Principals.

Last year a full-time staff of thirty-five teachers plus a number of student teachers from Boston University provided educational experiences for more than 600 high school youngsters living in this picturesque New England village.

Initiation of the Local Production Program

While discussing the development of team teaching at Wayland, Principal W. Maxwell Griffin indicated that after an initial year of experimentation with this approach to instruction it was already evident to the teachers, supervisors, and administrators that an audio-visual communication specialist had to be added to the teaching team. But this person must be no traditional "audio-visual man" who simply scheduled materials and worked with student projectionists! A true "communication specialist" was needed who could work as part of the teaching team, suggesting effective means and methods for conveying information to large or small groups, supplying information on sources of commercially available instructional materials, and assisting in or actually producing visual or audio teaching materials needed for effective development of the unit presentations.

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[3] Educational Facilities Laboratories, Inc. *Profiles of Significant Schools, Wayland Senior High School, Wayland, Massachusetts,* 28 pp.

[4] Trump, J.L., *Images of the Future,* 48 pp.

The Program in Action

Mr. Gerald McVey was hired as full-time Coordinator of Instructional Materials and Services and is presently performing the activities mentioned above. Here is an example of the way in which he contributes to the team approach. Last fall the team of teachers responsible for the course in American history wanted to develop the best unit possible on the Civil War. The American history teachers collaborated with the music instructor, the art instructor, an instructor of American literature, and Mr. McVey to plan an integrated presentation which they thought would best communicate the essential understandings and appreciations of this important period in our country's development. Related films, specially taped musical selections, colored slides, projected maps, etc. were all programmed into this series of presentations to approximately 150 students enrolled in American history. Other instructional materials were developed for use in the follow-up small group discussions. Twelve student assistants, working under the instructional coordinator's direction, assisted in the actual production of many of the locally developed teaching materials.

To make possible the local preparation of instructional materials needed by teachers, Mr. McVey has been provided with the following equipment.

MOUNTING

✓ DRY MOUNTING PRESS
✓ LAMINATING EQUIPMENT
✓ MOUNTING CLOTH (MUSLIN OR CHARTEX)
✓ MATERIALS FOR FRAMING WITH TAPE
✓ MOUNTING FOR 3-D MATERIALS

LETTERING

✓ MECHANICAL LETTERING DEVICES
✓ CUT-OUT LETTERS
✓ FELT-POINT PEN
— RUBBER STAMP
✓ PRIMARY TYPEWRITER
✓ STENCIL
— PASTE-UP LETTERS
— EMBOSSOGRAPH

COLORING

✓ AIR BRUSH
✓ COMMERCIAL ADHESIVE MATERIALS
✓ PLASTIC INKS
✓ OTHER INKS
✓ SLIDE CRAYONS
— TEMPERA
✓ WATER COLORS

PHOTOGRAPHY

✓ 35mm CAMERA
✓ 4x5 CAMERA
✓ ENLARGER
✓ POLAROID
✓ DARKROOM
✓ COPY EQUIPMENT
✓ 16mm CAMERA
✓ 2 1/4 x 2 1/4 CAMERA
— FILMSTRIP CAMERA

REPRODUCTION

✓ REFLEX COPY
✓ OTHER COPY PROCESSES
✓ MIMEOGRAPH
✓ DITTO
✓ DIAZO
✓ SILK SCREEN
— MULTILITH
— LINE-O-SCRIBE
— XEROX

A 8′ x 14′ production room has also been provided and approximately $2,000 was allotted in 1959-60 for production of needed teaching materials.

Last year the Wayland teachers—either individually or as a result of team-teaching efforts—and/or student assistants produced the following amounts and kinds of visual instructional materials.

Table 17. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Wayland High School Local Production Center

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES		✓	✓						✓
PHOTOGRAPHS		✓	✓						✓
MOUNTED PICTURES		✓	✓					✓	
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)	✓	✓	✓						✓
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓	✓	✓						✓
FLANNEL BOARDS	✓	✓	✓			✓			
FLANNEL BOARD MATERIAL SETS	✓	✓	✓			✓			
MOTION PICTURES			✓		✓				
EXHIBITS, DIORAMAS AND MURALS									
3¼ x 4 SLIDES			✓					✓	
MOUNTED SPECIMENS	✓	✓	✓				✓		
MODELS									
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

The In-Service Training Program

Three avenues were available during 1959-60 for the Wayland teachers to learn local production techniques useful in preparing their own teaching materials:

1. A televised course in audio-visual education for college credit was offered by Boston University. The Wayland teachers received, via television, a series of half-hour programs on the preparation and utilization of various audio-visual materials and equipment. Follow-up procedures included discussion of the correspondence lesson materials and actual practice in operation, production, and use of

the materials considered in the television lesson. Mr. McVey served as a major resource person for the group and supplemented the television instruction concerning local production techniques.

2. Certain teachers participated in summer workshops initiated to provide time for the planning and development of team-teaching approaches in the various academic areas. Part of this time was devoted to the preparation of needed instructional materials, and Mr. McVey worked with the teachers in the planning and production of these visual materials.

3. When teachers thought they could improve their instruction through the use of locally prepared visuals, Mr. McVey assisted them in producing these personally or helped them plan what they wanted and then either produced the materials himself or directed students as they did the actual production.

Need for Local Production

Whenever teachers are given the time and encouragement to improve their classroom presentations, they tend to begin searching for better ways to visualize the ideas and concepts they want students to understand. Seldom are all the visual materials they desire available commercially; many have to be produced locally to meet a specific need. In employing team teaching, Wayland teachers frequently hold classes for 150 students in specially built, large group lecture halls. Then the students break up into small sections of ten to twelve students to continue follow-up discussions and activities. For effective presentations in both large and small group situations, the teachers in the Wayland Senior High School have come to rely more and more upon the professional leadership, facilities, materials, and equipment available to them for the local preparation of visual materials they now deem indispensable for superior classroom instruction.

MALCOLM PRICE LABORATORY SCHOOL
STATE COLLEGE OF IOWA
CEDAR FALLS, IOWA

PRICE LABORATORY SCHOOL
CEDAR FALLS, IOWA

General Description of the School

The Malcolm Price Laboratory School is operated as part of the State College of Iowa. It is a model school dedicated to research and experimentation aimed at providing the best possible educational experiences for students from nursery and kindergarten through grade 12.

During the 1960-61 school year, 68 teachers plus more than 200 student teachers worked cooperatively to offer instruction to 386 elementary youngsters and 330 secondary school students.

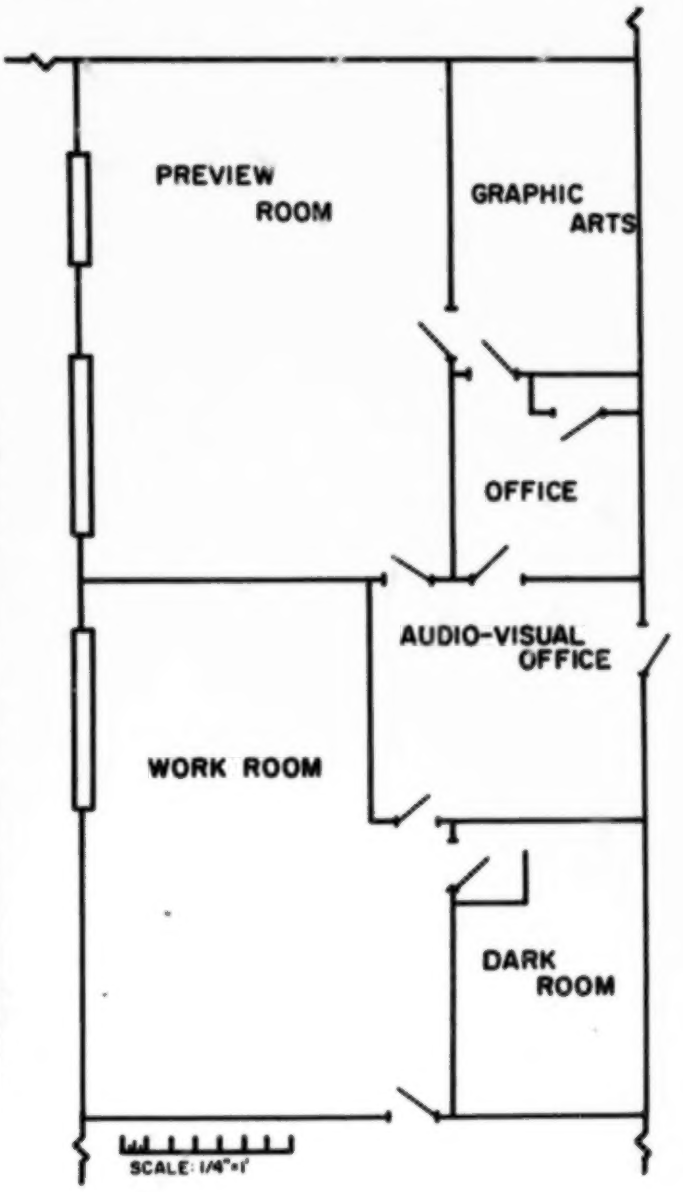
Since many of the regular teaching staff have master's and doctorate degrees and hold professional rank in the college, there is constant encouragement to better instructional methods and to improve curriculum offerings.

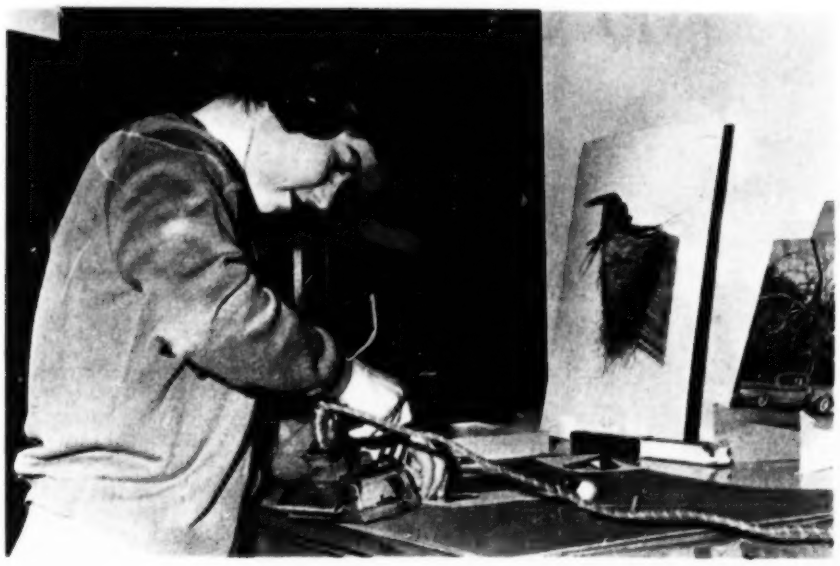
Initiation of the Audio-Visual Program

Approximately five years ago a survey of students about to undertake their student teaching revealed that only one out of four had had any training in the preparation and/or use of audio-visual materials in instruction. In an effort to correct this situation, Mr. Robert L. Paulson was given the challenging task of co-operatively developing a program designed to teach all student teachers how to operate audio-visual equipment, select and evaluate commercially available instructional materials, produce needed instructional materials not available commercially, and utilize correctly such audio-visual materials and equipment in a classroom situation.

Audio-Visual Center Facilities

As a result of fine administrative cooperation and support, Mr. Paulson has been able to develop an outstanding audio-visual center. The floor plan below shows the present lay-out of facilities.


PREVIEW ROOM
GRAPHIC ARTS
OFFICE
AUDIO-VISUAL OFFICE
WORK ROOM
DARK ROOM
SCALE: 1/4"=1'



The chart below includes a listing of the specific production materials and equipment now available in this school building preparation center.

MOUNTING

✓ DRY MOUNTING PRESS
✓ LAMINATING EQUIPMENT
✓ MOUNTING CLOTH (MUSLIN OR CHARTEX)
✓ MATERIALS FOR FRAMING WITH TAPE
✓ MOUNTING FOR 3-D MATERIALS

LETTERING

✓ MECHANICAL LETTERING DEVICES
✓ CUT-OUT LETTERS
✓ FELT-POINT PEN
✓ RUBBER STAMP
✓ PRIMARY TYPEWRITER
✓ STENCIL
✓ PASTE-UP LETTERS
✓ EMBOSSOGRAPH

COLORING

— AIR BRUSH
✓ COMMERCIAL ADHESIVE MATERIALS
✓ PLASTIC INKS
✓ OTHER INKS
✓ SLIDE CRAYONS
✓ TEMPERA
✓ WATER COLORS

PHOTOGRAPHY

✓ 35mm CAMERA
✓ 4x5 CAMERA
✓ ENLARGER
— POLAROID
✓ DARKROOM
✓ COPY EQUIPMENT
— 16mm CAMERA
— 2 1/4 x 2 1/4 CAMERA
— FILMSTRIP CAMERA

REPRODUCTION

✓ REFLEX COPY
✓ OTHER COPY PROCESSES
✓ MIMEOGRAPH
✓ DITTO
✓ DIAZO
✓ SILK SCREEN
— MULTILITH
— LINE-O-SCRIBE
— XEROX

The In-Service Education Program

All student teachers are required to work in the audio-visual center and to learn to operate equipment, to select and prepare materials. The instruction is conducted by the audio-visual specialist.

With the help of college student assistants, the instructor stresses skills needed by teachers to select effectively and use commercial audio-visual materials and to produce and utilize locally made instructional materials.

The audio-visual specialist provides this same instruction and assistance to the faculty and students on an individual or small group basis throughout the school year. In addition, he frequently holds sessions with individual teaching departments to demonstrate the possibilities for local development of visual instructional materials in specific academic areas.

What is the result of such an in-service training program? Last year, with the help of the audio-visual director, students ranging from the fourth grade to high school prepared charts, maps, mounted pictures, slides, and other transparencies for use in their classes.

The teachers in the mathematics department, for instance, have cooperatively prepared and catalogued numerous 10 x 10 overhead transparencies useful in teaching both modern and traditional mathematical concepts. These transparencies are carefully catalogued and stored in the mathematics suite, where they are readily available to all the mathematics instructors and their student teachers.

The chart presented below gives some idea of the quantity and scope of materials completed during 1959-60.

Table 18. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Malcolm Price Laboratory School Local Production Center

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11— 20	21—50	51—100	OVER 100
2 x 2 SLIDES	✓	✓	✓						✓
PHOTOGRAPHS	✓	✓	✓						✓
MOUNTED PICTURES	✓	✓	✓						✓
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)	✓	✓	✓						✓
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓	✓	✓						✓
FLANNEL BOARDS	✓	✓	✓				✓		
FLANNEL BOARD MATERIAL SETS	✓	✓	✓				✓		
MOTION PICTURES									
EXHIBITS, DIORAMAS AND MURALS	✓	✓			✓				
3¼ x 4 SLIDES									
MOUNTED SPECIMENS									
MODELS									
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

Future Needs

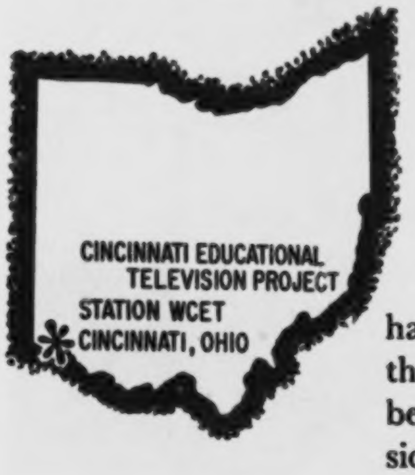
Mr. Paulson thinks he can adequately take care of the present duties concerned with the local production program as part of his full-time job as the laboratory school's audio-visual specialist. However, if the interest and activity concerned with the production of visual instructional materials continues to grow as it has in recent years, additional help in the form of a graphic production specialist may soon be needed.

The Malcolm Price Laboratory School prides itself in trying out new ideas and methods of instruction and retaining those that facilitate teaching efficiency. The school's Audio-Visual Center, with its excellent provisions for encouraging local production of instructional materials, is certainly an outstanding case in point.

PRODUCTION PROGRAMS SERVING A PUBLIC SCHOOL EDUCATIONAL TELEVISION STATION

Outstanding examples of local production programs serving the needs of educational television were found in operation in the Cincinnati Educational Television Project, Cincinnati, Ohio; the Washington County Closed-Circuit Television Project, Hagerstown, Maryland; and the Dade County Television Project, Miami, Florida.

CINCINNATI EDUCATIONAL TELEVISION STATION WCET CINCINNATI, OHIO



Few, if any, school systems throughout the United States have had the wealth of experience with educational television which the Cincinnati public schools have had. From a rather inconspicuous beginning in November, 1954, the Cincinnati Educational Television Project has today become one of the most extensive and respected operations of its kind in the world. The Cincinnati public schools through Station WCET beamed 310 hours of educational telecasting during the 1959-60 school year of which 230 hours were classified as enrichment type of programs for pupils and after-school telecasts for teachers. These telecasts reached more than 18,000 students, in addition to adult citizens in Cincinnati and surrounding areas, many of whom viewed the programs regularly. More than 500 teachers viewed the after-school programs. Although the "on the air" time noted above is certainly impressive, it should be noted that the major concern of Miss Helen Seel, Supervisor of Educational Television, is the quality of programming rather than the quantity. This concern for quality is immediately apparent as one views the programs originating from WCET.

One of the important contributing factors to the quality programming at Cincinnati is the outstanding program that has been established for the local preparation of visual materials. The television teachers are continually striving to do a more effective job of clarifying concepts through the use of all types of locally produced visual materials. The following information will provide some insight into the procedures utilized at Cincinnati in making effective visual materials for instruction.

repeat business
HOUSE

Supervision of the Program

Miss Helen Seel, Supervisor of Educational Television, is responsible for the overall supervision of television, including the local preparation program for the television station. Working under her direction, a person doubling as a program producer and graphic illustrator assumes the operational responsibility for directing the activities of the preparation center. Actually very little supervision is needed since the television teachers and production specialists work very closely in the preparation of the visuals needed. Such an arrangement frees the supervisor to attend to other matters related to the operation of the program, while at the same time she is assured that quality materials are forthcoming for use on the television programs.

Administratively the Office of Educational Television is under the jurisdiction of the associate superintendent of schools in charge of instruction. Therefore, Miss Seel is responsible to that individual. This administrative arrangement enables the persons associated with educational telecasting to maintain close liaison with those individuals responsible for the curriculum of the school. For effective educational television programming, this intimate relationship between media and message seems to be essential.

Equipment and Materials

The demands of educational television programming are not the same as those for regular classroom instructional programming. Consequently, the equipment and materials required for effective visualization of ideas over television differ somewhat from a conventional school situation. The table on the next page indicates the equipment and materials available in the Cincinnati local preparation center.

Although not as diverse as those in many school preparation centers, the available resources in Cincinnati seem to meet the demands of the situation.

MOUNTING

✓ DRY MOUNTING PRESS
___ LAMINATING EQUIPMENT
___ MOUNTING CLOTH (MUSLIN OR CHARTEX)
___ MATERIALS FOR FRAMING WITH TAPE
✓ MOUNTING FOR 3-D MATERIALS

LETTERING

✓ MECHANICAL LETTERING DEVICES
✓ CUT-OUT LETTERS
✓ FELT-POINT PEN
___ RUBBER STAMP
___ PRIMARY TYPEWRITER
✓ STENCIL
___ PASTE-UP LETTERS
___ EMBOSSOGRAPH

COLORING

✓ AIR BRUSH
✓ COMMERCIAL ADHESIVE MATERIALS
✓ PLASTIC INKS
✓ OTHER INKS
✓ SLIDE CRAYONS
___ TEMPERA
___ WATER COLORS

PHOTOGRAPHY

___ 35mm CAMERA
✓ 4x5 CAMERA
✓ ENLARGER
___ POLAROID
✓ DARKROOM
✓ COPY EQUIPMENT
___ 16mm CAMERA
___ 2 1/4 x 2 1/4 CAMERA
___ FILMSTRIP CAMERA

REPRODUCTION

___ REFLEX COPY
___ OTHER COPY PROCESSES
✓ MIMEOGRAPH
✓ DITTO
___ DIAZO
___ SILK SCREEN
___ MULTILITH
___ LINE-O-SCRIBE
___ XEROX

Production and Utilization of Materials

During the 1960-61 school year the equivalent of two and one half-time individuals was employed by the television center to produce visual materials. Two of the individuals then employed were graduates of the Cincinnati Art Academy. The other staff member, with specialized training in the preparation of graphic materials, doubled as a program producer and graphic artist. The professional artists devoted most of their energy to creative-type visual materials while the graphic artist was occupied with photographic and mechanical-type production activities.

At the time of the study the television teaching staff consisted of four full-time television teachers and one teacher who taught once a week. Other teachers appeared on television for periods of short duration usually for the purpose of providing enrichment programs for students. The four regular television teachers had available to them an average of twenty to twenty-five hours a week of professional assistance in the preparation of visual materials. In addition to this professional help, the television teachers spent many hours each week securing their own visual materials from community resources. Even with this wealth of production resources, most of the individuals associated with the television program were strongly in favor of adding another person to the visual production staff to assist in securing and producing visual materials. With the present staff, however, a great variety of visuals is prepared as indicated in the table below.

Table 19. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Local Television Production Center, Cincinnati, Ohio

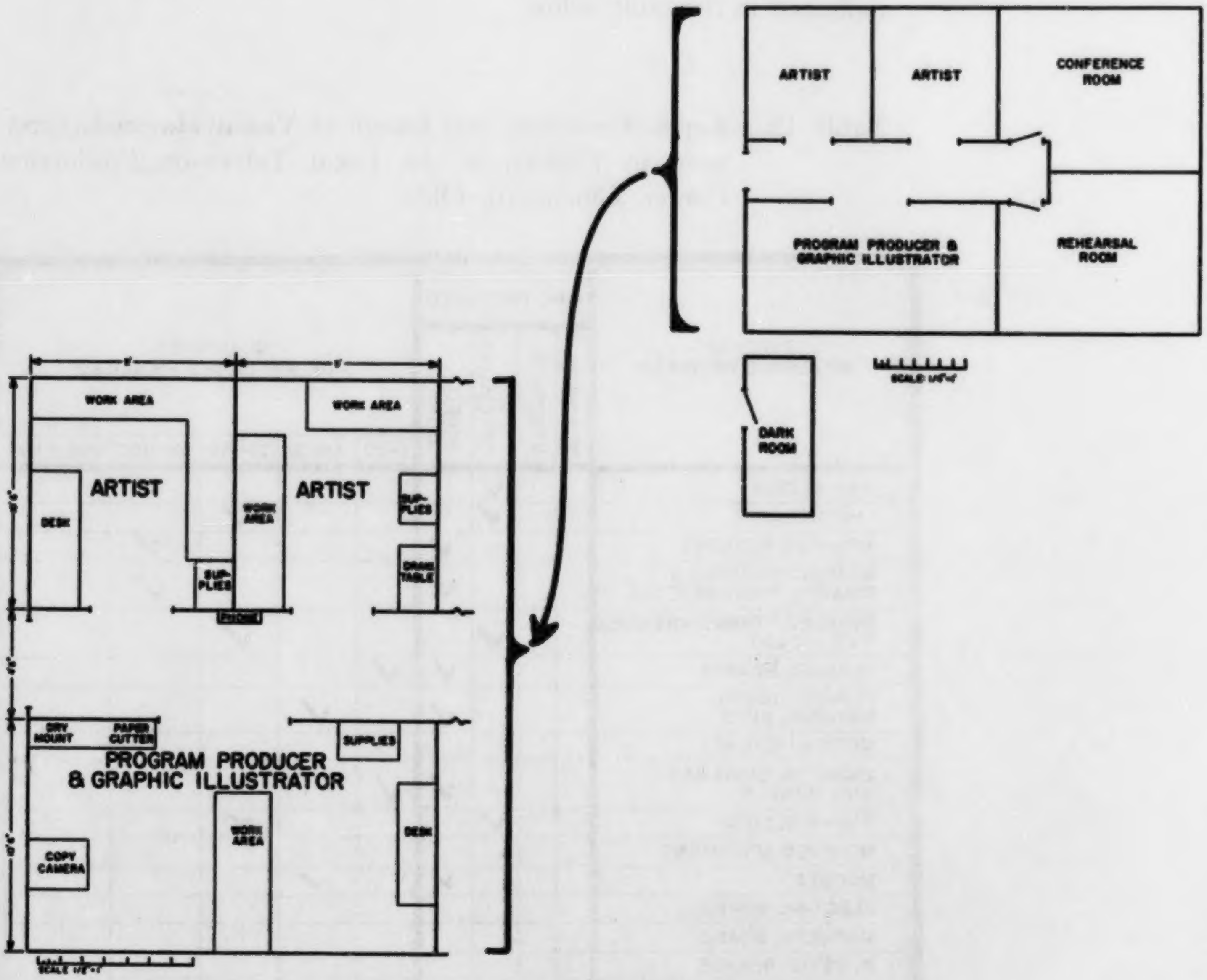
TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES			✓					✓	
PHOTOGRAPHS			✓				✓		
MOUNTED PICTURES				✓				✓	
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)				✓				✓	
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10			✓				✓		
FLANNEL BOARDS				✓	✓				
FLANNEL BOARD MATERIAL SETS				✓		✓			
MOTION PICTURES									
EXHIBITS, DIORAMAS AND MURALS				✓	✓				
3¼ x 4 SLIDES			✓				✓		
MOUNTED SPECIMENS									
MODELS				✓		✓			
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

In-Service Education

No systematic attempt has been made to conduct in-service education programs for the television teachers in the preparation of visual instructional materials. All of the television teachers, however, receive a thirty-two page *Handbook for Television,* developed by the television staff, and are well informed concerning the possibilities of local production, as attested to by their extensive use of such materials. Incidental concomitant learnings along these lines have resulted from their former classroom teaching and from their constant contact with the program producers, station directors, professional artists, and graphic expert.

Facilities

The Cincinnati school officials have provided adequate but not "plush" facilities for the preparation of visual materials to be


ARTIST
ARTIST
CONFERENCE ROOM
PROGRAM PRODUCER & GRAPHIC ILLUSTRATOR
REHEARSAL ROOM
SCALE 1/8"=1'
DARK ROOM
WORK AREA
WORK AREA
ARTIST
DESK
ARTIST
WORK AREA
SUP-PLIES
SUP-PLIES
DRAW TABLE
PHONE
DRY MOUNT
PAPER CUTTER
SUPPLIES
PROGRAM PRODUCER & GRAPHIC ILLUSTRATOR
WORK AREA
DESK
COPY CAMERA
SCALE 1/2"=1'

utilized by personnel associated with the Cincinnati Public School Television Program. The floor plan shown below provides information on the facilities available.

The Cincinnati School System will soon be faced with the problem of either continuing their educational television programming at a considerably increased cost or returning to conventional classroom teaching only. If the dedication and apparent effectiveness of the television staff are given serious consideration by those making this decision, there will be educational television in Cincinnati for many more years, and one very important phase of the program will be the visual preparation center.

WASHINGTON COUNTY CLOSED CIRCUIT TELEVISION PROJECT HAGERSTOWN, MD.

WASHINGTON
COUNTY
CLOSED-CIRCUIT
TELEVISION PROJECT
HAGERSTOWN, MARYLAND

General Description of T-V Project

The Hagerstown project with closed circuit telecasts in the public schools of Washington County, Maryland, is perhaps as well known as any recent experiment in education. Beginning modestly with eight schools, the project now includes thirty-eight schools equipped with 650 television sets. Approximately 16,800 students received part of their instruction via closed circuit television during the 1959-60 school year. An average of twenty-five lessons was presented daily with elementary grade telecasts planned for fifteen to twenty-five minutes each and secondary school programs utilizing a half or a whole period according to the course and the number of weekly telecasts.

Twenty-five full-time and three part-time television teachers and four full-time staff members composed the regular team, with thirty-five students from Hagerstown Junior College getting part-time, on-the-job training in television operations.

The Washington County Television Center is one of the most completely equipped non-commercial stations in the United States. Each of the five studios has two professional vidicon cameras and complete lighting equipment. The film center is equipped with four cameras, two 16mm film projection chains, several slide projectors, and equipment for sound or film reproduction. A video-tape recorder also has been added.

In addition to televising regular curriculum programs, the facility is used frequently for special courses and services. Special mathematics courses are provided for students capable of more advanced work. Professional teachers meetings and in-service training sessions are also televised. This enables teachers to share in the initial television discussions and presentations and then continue these deliberations in their own buildings.

Telecasts during after-school hours supplement the adult education program.

Provisions for Local Preparation of Instructional Materials

Keeping twenty-five full-time teachers supplied with the many and varied kinds of visual instructional materials they desire to use during their telecasts is a real challenge. Mr. George Ropp, Supervisor of Television Instruction, has made progress toward the solution of this problem by employing as graphics specialists three graduates of Hagerstown high schools who had demonstrated unusual art ability. These students work closely with specific television teachers, finding out what type of visual is desired and then creating it. Most of these visual materials are developed free-hand, with little attempt to utilize commercial art aids, clip books, or photographic techniques. A small amount of photographic material on the local community has been made by studio teachers and an occasional professional photographer.

MOUNTING

- ___ DRY MOUNTING PRESS
- ___ LAMINATING EQUIPMENT
- ___ MOUNTING CLOTH (MUSLIN OR CHARTEX)
- ___ MATERIALS FOR FRAMING WITH TAPE
- ✓ MOUNTING FOR 3-D MATERIALS

LETTERING

- ___ MECHANICAL LETTERING DEVICES
- ___ CUT-OUT LETTERS
- ✓ FELT-POINT PEN
- ___ RUBBER STAMP
- ✓ PRIMARY TYPEWRITER
- ___ STENCIL
- ___ PASTE-UP LETTERS
- ✓ EMBOSSOGRAPH

COLORING

- ___ AIR BRUSH
- ✓ COMMERCIAL ADHESIVE MATERIALS
- ___ PLASTIC INKS
- ✓ OTHER INKS
- ✓ SLIDE CRAYONS
- ✓ TEMPERA
- ___ WATER COLORS

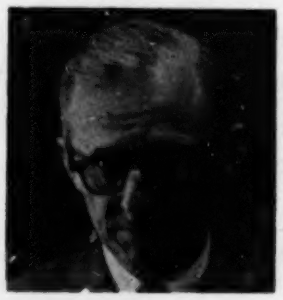
PHOTOGRAPHY

- ✓ 35mm CAMERA
- ___ 4x5 CAMERA
- ___ ENLARGER
- ✓ POLAROID
- ___ DARKROOM
- ___ COPY EQUIPMENT
- ___ 16mm CAMERA
- ___ 2 1/4 x 2 1/4 CAMERA
- ___ FILMSTRIP CAMERA

REPRODUCTION

- ___ REFLEX COPY
- ✓ OTHER COPY PROCESSES
- ✓ MIMEOGRAPH
- ✓ DITTO
- ___ DIAZO
- ___ SILK SCREEN
- ___ MULTILITH
- ___ LINE-O-SCRIBE
- ___ XEROX

This listing of production equipment available to the graphic artists seems rather meager by comparison with quantities of equipment and materials in other systems reviewed in this booklet.



Mr. Ropp stated that the availability of certain preparation equipment in use elsewhere might permit expansion of local production activities, but this would increase costs. The following listing of visual materials produced during the 1959-60 school year is surprisingly impressive in both amount and scope of materials developed.

Table 20. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Local TV Production Center of Washington County, Maryland

TYPES OF MATERIALS PRODUCED	WHC PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11— 20	21—50	51—100	OVER 100
2 x 2 SLIDES			✓						✓
PHOTOGRAPHS	✓		✓						✓
MOUNTED PICTURES	✓								✓
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)				✓					✓
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10				✓					✓
FLANNEL BOARDS									
FLANNEL BOARD MATERIAL SETS									
MOTION PICTURES	✓				✓				
EXHIBITS, DIORAMAS AND MURALS				✓					✓
3¼ x 4 SLIDES									
MOUNTED SPECIMENS	✓						✓	✓	
MODELS				✓					
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

Special In-Service Needs for Television Teachers

Television teaching presents certain unique problems and considerations in the preparation and use of visual materials. Because the television programs originating in the Washington County television station are viewed by some 780 different teachers and more than 16,000 students, there is understandable concern over the visual quality of the instructional materials which the television teachers use. All five of the Hagerstown television teachers interviewed indicated that the most satisfactory way of securing needed visual materials was personally to outline the purpose, content, and suggested design of the proposed visual and then depend upon the graphic art specialist to do the actual production.

This seemingly general practice of employing such specialists to prepare visual instructional materials for television teachers results in different in-service training programs for these teachers. Such activities at Hagerstown are concerned mainly with alerting the television teachers to the need for using graphs, charts, diagrams, and other means of visual communication in their telecasts and with presenting the unique contributions of various types of visual media. These in-service functions were included as part of the summer workshops conducted for all the Hagerstown television teachers.

Evaluation Results are Encouraging

What effect the use of television has had in the educational program of Washington County probably will not be known for many years. Evaluation of results to date are encouraging. Both school personnel and the lay public know that closed-circuit television has provided many educational opportunities previously not available. Enrichment of the elementary school program by the addition of courses in art, music, conversational French, and remedial teaching has resulted. Guidance telecasts for high school students, special programs to assist students in course selections, adult reading improvement classes, and advanced courses for gifted pupils are other examples. Objective tests indicate improvement in pupil achievement in mathematics, science, language skills, and college entrance examinations.

At Hagerstown, excellent television teachers who are provided with the commercial and locally produced visual instructional materials they desire seem to be making a substantial contribution toward sound public school education.

DADE COUNTY TELEVISION PROJECT
DADE COUNTY PUBLIC SCHOOLS
MIAMI, FLORIDA

DADE COUNTY
EDUCATIONAL
TELEVISION PROJECT
MIAMI, FLORIDA

One of the outstanding features of the Dade County Television Project is the extent to which locally produced visual materials are utilized in their educational television programs. Not only is there a wide variety of such materials used, but they are utilized very effectively. The area where few public schools, whether instructing by television or by conventional methods, can compare with the Dade County Project is that of the use of locally produced film clips. As the table below indicates, in excess of 100 film clips were prepared during the 1959-60 school year for use by the thirteen television teachers involved in the Dade County experiment.

Table 21. Types, Producers, and Extent of Visual Materials Produced in 1959-60 in the Local TV Production Center of Dade County, Florida

TYPES OF MATERIALS PRODUCED	WHO PRODUCED				QUANTITIES OF MATERIALS PRODUCED				
	TEACHERS	STUDENTS	A-V SPECIALIST	HIRED ARTIST	1—10	11—20	21—50	51—100	OVER 100
2 x 2 SLIDES	✓		✓						✓
PHOTOGRAPHS			✓						✓
MOUNTED PICTURES									
GRAPHIC MATERIALS (CHARTS, POSTERS, ETC.)	✓			✓					✓
OVERHEAD TRANSPARENCIES 7 x 7—10 x 10	✓			✓					✓
FLANNEL BOARDS	✓					✓			
FLANNEL BOARD MATERIAL SETS	✓			✓					✓
MOTION PICTURES	✓		✓						✓
EXHIBITS, DIORAMAS AND MURALS	✓			✓					✓
3¼ x 4 SLIDES	✓		✓						✓
MOUNTED SPECIMENS									
MODELS	✓			✓					✓
ELECTRIC BOARD									
MAGNETIC BOARD									
PLASTIC BOARDS									
PLASTIC BOARD INSERTS									

The television teachers, in addition to using many film clips, also make extensive use of many other types of visual materials, a fact clearly indicated in the table above. Indeed, the actual number of visual materials produced in the Dade County Television Preparation Center would compare favorably with any other center identified in this study.

With hundreds of visual materials being produced in the preparation center, it is obvious that considerable human energy

MOUNTING

☐ DRY MOUNTING PRESS
☐ LAMINATING EQUIPMENT
☐ MOUNTING CLOTH (MUSLIN OR CHARTEX)
☑ MATERIALS FOR FRAMING WITH TAPE
☑ MOUNTING FOR 3-D MATERIALS

LETTERING

☑ MECHANICAL LETTERING DEVICES
☑ CUT-OUT LETTERS
☑ FELT-POINT PEN
☐ RUBBER STAMP
☑ PRIMARY TYPEWRITER
☑ STENCIL
☐ PASTE-UP LETTERS
☐ EMBOSSOGRAPH

COLORING

☐ AIR BRUSH
☐ COMMERCIAL ADHESIVE MATERIALS
☑ PLASTIC INKS
☑ OTHER INKS
☑ SLIDE CRAYONS
☐ TEMPERA
☐ WATER COLORS

PHOTOGRAPHY

☑ 35mm CAMERA
☑ 4x5 CAMERA
☑ ENLARGER
☑ POLAROID
☑ DARKROOM
☑ COPY EQUIPMENT
☑ 16mm CAMERA
☐ 2¼ x 2¼ CAMERA
☐ FILMSTRIP CAMERA

REPRODUCTION

☐ REFLEX COPY
☑ OTHER COPY PROCESSES
☑ MIMEOGRAPH
☑ DITTO
☐ DIAZO
☐ SILK SCREEN
☐ MULTILITH
☐ LINE-O-SCRIBE
☐ XEROX

had to be expended to accomplish this feat. Thirteen television teachers, a photographer, and the equivalent of one and one-half persons with training in the field of art were responsible for the production of these materials. The work of these "producers of materials" is facilitated by the availability of a variety of preparation equipment and materials, as shown in the table on the preceding page.

Although other local preparation equipment centers have more elaborate facilities and possess more equipment and materials than the Dade County Center, it is doubtful whether any of them utilize the available resources more efficiently and effectively. The motto of Mr. Cliff Mitchell, General Manager of the Dade County Television Project, seems to be "Make the Most of What's Available."

TRADITIONS LANE

UNIQUE FEATURES OF OTHER PRODUCTION PROGRAMS

Cognizant of the fact that knowledge of certain features of other programs visited would be helpful to administrators and teachers, the investigators have made an effort to select unique or outstanding aspects of these programs for inclusion in the study.

The statements that follow are not intended to portray the extent of operations of any one program; in fact, the activity described will respresent only a unique aspect of the total local production program.

SAN DIEGO CITY SCHOOLS
SAN DIEGO, CALIFORNIA

SAN DIEGO CITY SCHOOLS
SAN DIEGO, CALIFORNIA

The San Diego City Instructional Materials Center is a resource center for all types of instructional materials that any teacher anywhere would welcome. The locally produced materials available range from a simple mounted picture to elaborate three-dimensional dioramas that are estimated to cost in excess of $700 each. Even with this "supermarket" of materials available for the asking, teachers in Carver Elementary School expressed a need for some specialized locally produced materials. A group of PTA mothers, recognizing the heavy instructional load of Carver teachers, volunteered to prepare these materials. A room and limited equipment and materials were made available for the work envisaged. The principal of this elementary school describes the program below.

P.T.A. Workshop

In March, 1960 an enthusiastic group of P.T.A. members organized a workshop at Carver Elementary School to make reading and number games for the primary grades. The parents met every Tuesday morning throughout the spring semester. The enthusiasm and interest of these parents was so great that frequently they ate lunch at school and continued to work in the afternoon staying until the children were excused. Frequently a parent coming to school on any other day of the week would stop by the workshop room and work for a short time. When summer came, the parents asked if they could continue. So the group met every other Tuesday throughout July and August.

At first the group worked directly under the principal. However, this consumed too much of the principal's time so three chairmen were appointed. Each chairman was responsible for approximately six items. The chairman could then order, prepare, and distribute the supplies necessary for her particular games. This system has proved very efficient and successful. Many times different people come each week with varying talents. The chairman has the materials ready and can supply them to each person according to her interest, ability, and talent. There is a job for everyone. The jobs range from cutting and pasting—to games requiring real artistic talent. Most parents come regularly; and some occasionally, and we even have one parent who is extremely talented artistically who cannot come to school but will paint for us at home if we send the items and directions to her. This is truly a case of "the mountain going to Mohammed."

The workshop games are generally prepared in sets of ten. With this many games, we provide one for each primary teacher, one for the P.T.A. display set, one for the principal, and one for a loan collection. The collection of samples is loaned out to other schools or teachers who wish to make games for their children.

Supplies are available from the school stock room. In addition, many free items are available from parents and local stores. Stocking boxes are a much used item. Any of the large department stores will give these away. Catalogues, magazines, buttons, linoleum samples, and cardboard are readily available also. P.T.A. Parents' Bulletin or announcements to parent faculty groups promptly provide needed help or items for the workshop.

Since the beginning of our workshop it has been expanded to provide items for the upper grades as well as the lower. Teachers send to the workshop a sample, or description of a needed classroom item or items. Generally the requests are filled the same day the order is received.

The dry mount press has been a very valuable piece of machinery. It will permanently mount pictures. The process takes only 45 seconds after the tissue and chipboard has been cut the size of the picture to be mounted. The press will mount pictures of any size and has allowed us to prepare sets of 40 maps of various areas of the world. In the long term outlook dry mounting should save on the cost of supplies.

Prior to the dry mounting operation these items such as colored maps were expendable; now they become a permanent collection to be checked out by classrooms when they need them. *To further ensure the permanency of these items,* they have been covered with a clear lacquer.

The Carver workshop has been host to many groups of P.T.A. members from schools throughout the city that are interested in starting a similar project.

As every new parent enrolls her child, she is given a tour of our workshop and a personal invitation to participate. It is a good way to make friends for people who are new in our neighborhood. Likewise, the workshop has been a real educational experience for parents. They are learning about the many ways teachers have of making "learning fun" through reading the number games. They take this opportunity to ask questions about the curriculum, school policy, and any other items connected with the Carver program. The workshop has given the parents a new understanding of the teachers' work outside of the classroom. The teachers, in turn, are very grateful for the many hours involved in producing items for the classroom which previously they had done at night, on weekends, and during the summer vacation. The teacher still has much to do to provide samples and ideas but both groups—parents and teachers—have benefitted from this alliance. Even the children are more appreciative, proud, and protective of the classroom enrichment items because as one first grade tyke said, "We must take care of the game because mother made it."

In less than one year our workshop has produced hundreds and hundreds of useful items. There have been over 350 games, sixty plywood people, creative writing booklets, acetate folders, arithmetic counters, flat prints, flannel board stories, clay containers, and many, many other items.

So far there have been only two disadvantages to our project. One, there are not enough hours in the week to make all of the items we would like. The spirit of everyone is willing but time is lacking. Two, the budget is beginning to groan under the load.

Since we have two disadvantages we are attempting to seek a way of removing these. We are going to send notices to parents—one room a week seeking more workers. In addition, we are trying to locate firms that will contribute discarded supply items such as chipboard. These two things should increase production and cut down on the cost. Sounds like we are "big business."

Near the end of the school year, the Carver teachers annually give a very lovely tea honoring all parents who have worked at school or for the school during the past year. This "spring tea" is a much-looked-forward to event by our community. In the past it has honored the parents who have helped with the bike safety program, room parties, and other such projects. This year among those highly honored will be our workshop mothers.

Mrs. Dawson
Principal

ROSWELL PUBLIC SCHOOLS
ROSWELL, NEW MEXICO

ROSWELL PUBLIC SCHOOLS
ROSWELL, NEW MEXICO

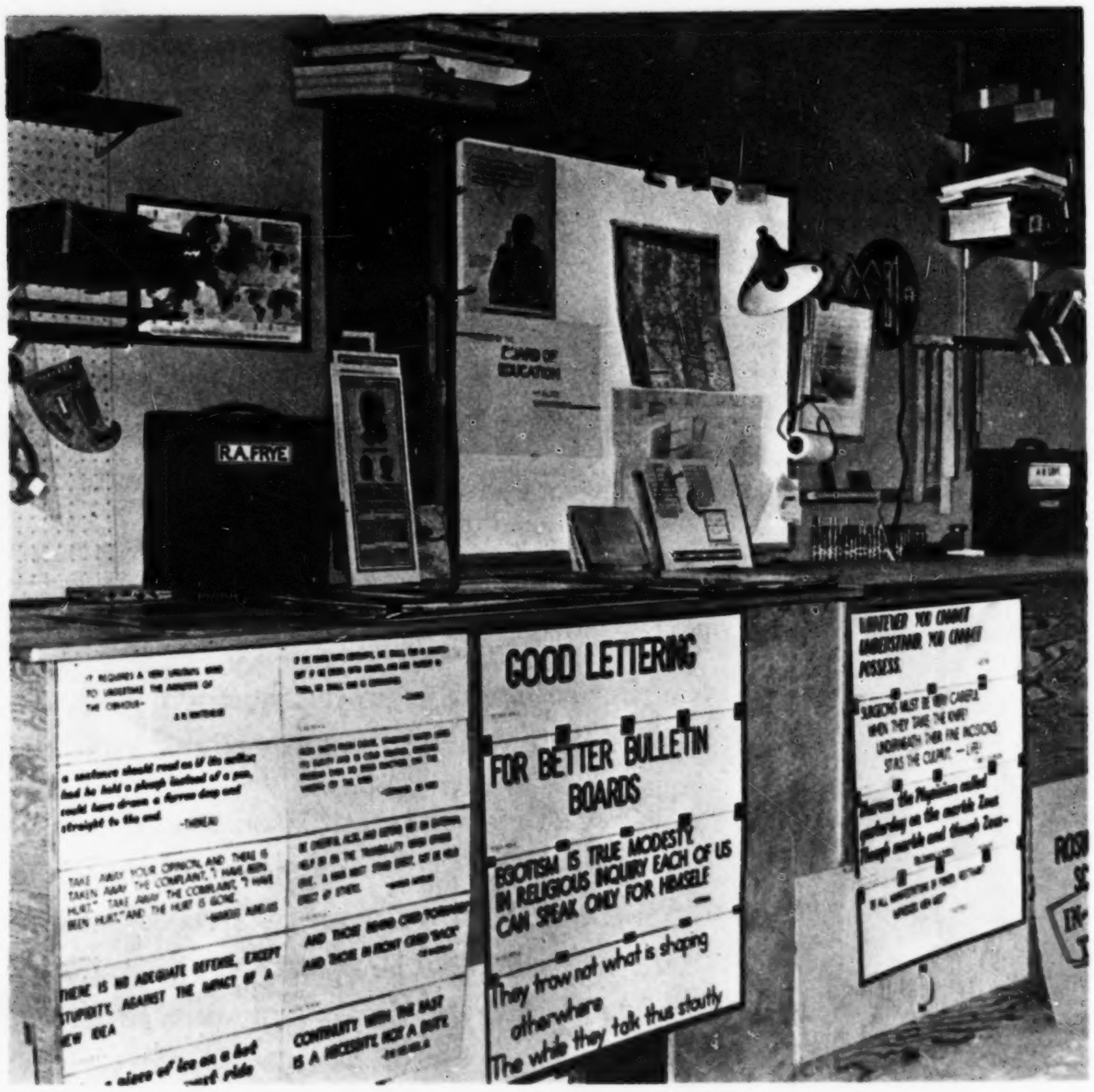
How many audio-visual directors would be willing to sacrifice a recreation room in their home to enable teachers to have locally produced materials available for use? Or even a more limiting question, "How many wives of audio-visual directors would be willing to make this sacrifice?" Mr. Roy Frye and his wife of Roswell, New Mexico (now of University of Texas), did just that. Undoubtedly this act represents the ultimate in dedication to a field of endeavor.

The local preparation area in Roy's home was utilized primarily by himself to make materials for teachers. Even though this was the common practice, the room was available for use by any teacher who expressed a desire to make his own materials.

Another important aspect of the local production program that grew out of Roy's home was his in-service education activities. Roy arranged with a nearby university to offer a college course for credit in Roswell dealing with the preparation of instructional materials. Teachers in the system were encouraged to take the course, and some 90 per cent had completed such a class at the time the writers visited the school. The credit earned from this course counted toward meeting the requirements for a salary increase in the Roswell School System.

Mr. Frye has been one of the strongest supporters of the windowless school. In 1960 Roswell had two such schools with plans for more. Roy's desire to have an ideal learning environment for the use of visual instructional materials was instrumental in selling the windowless school idea in Roswell. His concern for good utilization of materials also prompted him to mark out the ideal viewing area for projected materials in each classroom within these windowless schools. This was done by installing a permanently mounted wall screen and then utilizing different colored floor tile to mark the optimum viewing area.

There is no doubt that New Mexico's loss was Texas' gain when Roy Frye decided to join the faculty at the University of Texas.


R.A.FRYE
BOARD OF EDUCATION
GOOD LETTERING
FOR BETTER BULLETIN BOARDS
EGOTISM IS TRUE MODESTY. IN RELIGIOUS INQUIRY EACH OF US CAN SPEAK ONLY FOR HIMSELF
They trow not what is shaping otherwhere
The while they talk thus stoutly
THERE IS NO ADEQUATE DEFENSE, EXCEPT STUPIDITY, AGAINST THE IMPACT OF A NEW IDEA
CONTINUITY WITH THE PAST IS A NECESSITY, NOT A DUTY
TAKE AWAY YOUR OPINION, AND THERE IS TAKEN AWAY THE COMPLAINT, "I HAVE BEEN HURT." TAKE AWAY THE COMPLAINT, "I HAVE BEEN HURT," AND THE HURT IS GONE.
WHATEVER YOU CANNOT UNDERSTAND YOU CANNOT POSSESS

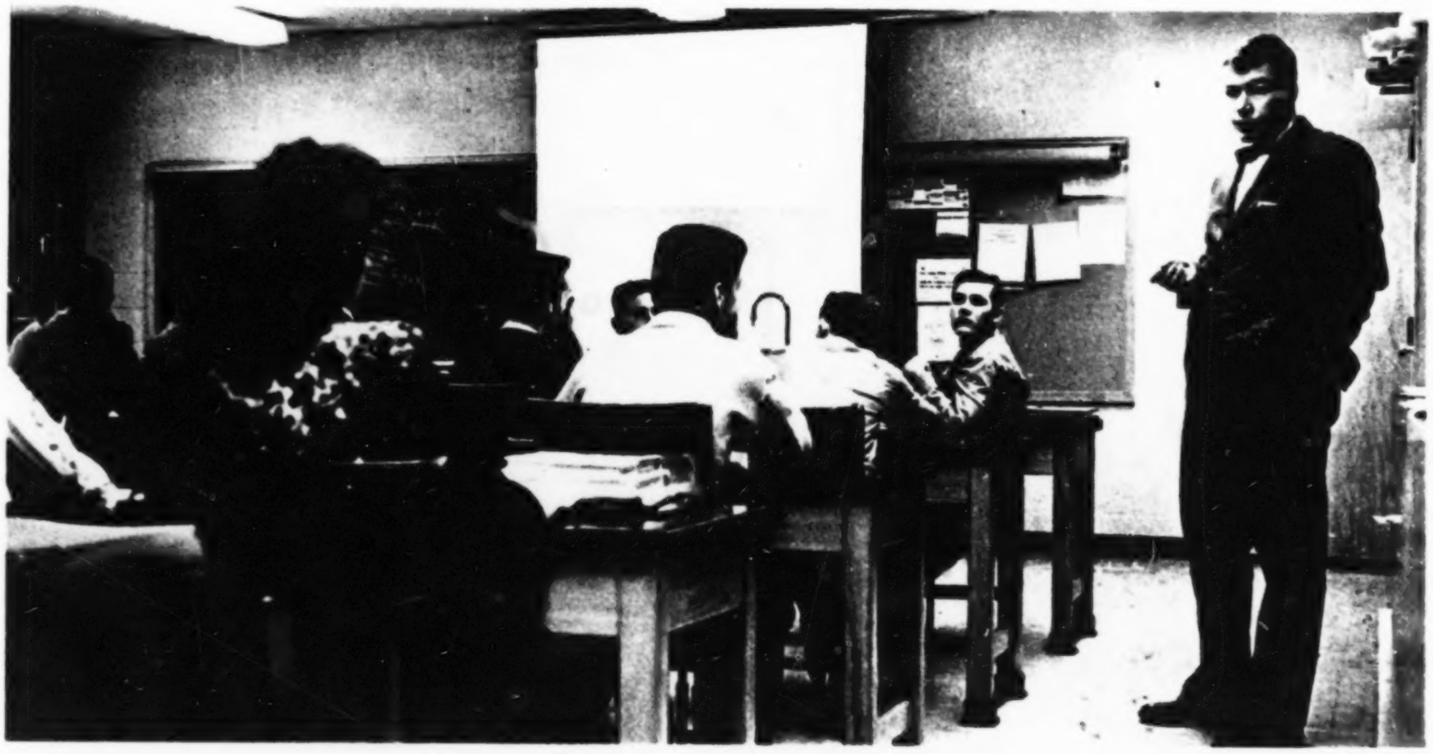
FENTON HIGH SCHOOL
BENSONVILLE, ILLINOIS

*
FENTON
HIGH SCHOOL
BENSONVILLE, ILLINOIS

Can an audio-visual coordinator teach three or four classes a day, be head of a large high school science department, and still have a highly effective local preparation program? Mr. Ed Eide at Fenton High School has done this. What is his secret?

The secret seems to evolve around the use of students plus a very mobile program. Mr. Eide has student assistants who engage extensively in the preparation of materials. These students are assigned to the audio-visual program a period a day and spend this time in preparation work.

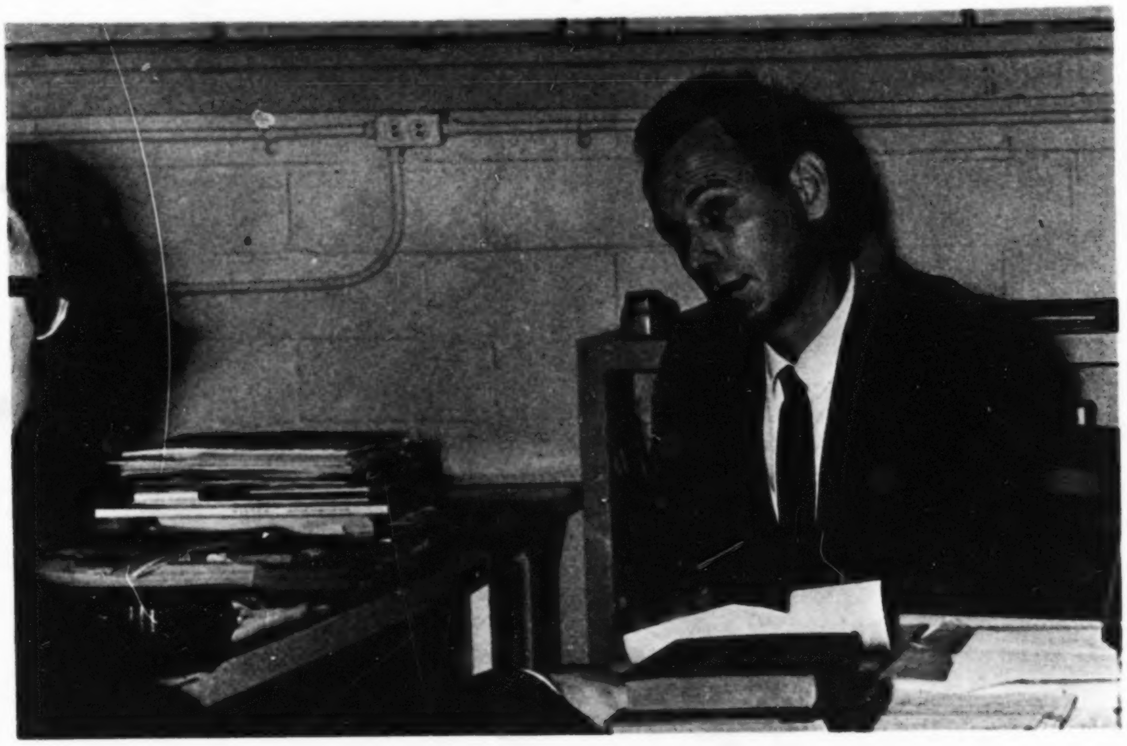
One unique feature of the program is its mobility. All of the production equipment is on wheels. A teacher can have the equipment brought to his room if he wishes and materials can be prepared there. It is not unusual to see a student "wheeling" a dry-mounting press down the hallway. Mr. Eide thinks that this mobility has partially overcome his lack of space for prouction. According to the teacher interviews, the preparation program "on wheels" is making a significant contribution to the instructional program at Fenton High School.



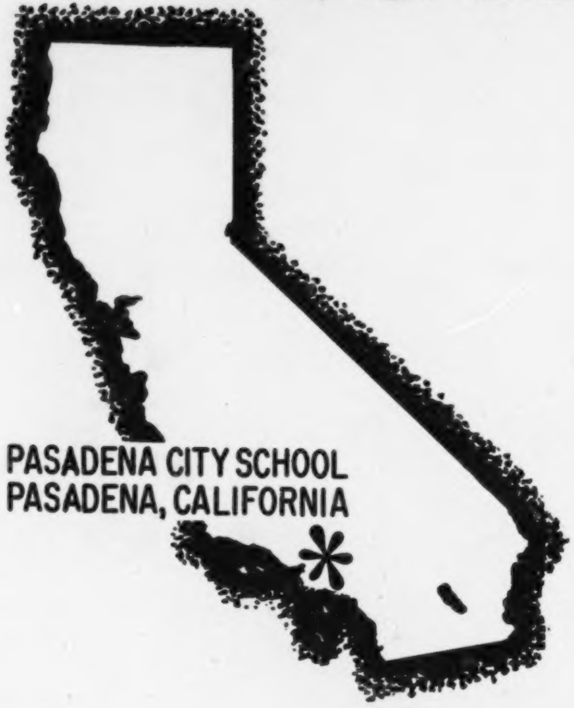
BRAZOSPORT INDEPENDENT SCHOOL DISTRICT FREEPORT, TEXAS

BRAZOSPORT INDEPENDENT
SCHOOL DISTRICT
FREEPORT, TEXAS

Three teachers in Freeport, Texas, with a common dream about the establishment of an instructional resources center started working diligently in 1953 in an effort to make their dream come true. Today one can see the fruits of their efforts in the Brazosport Division of Instructional Resources. Mr. B. I. Boyett and Mr. John Dunn, two of the originators of the instructional resources idea in Freeport, are still very active in the program. Mr. Dunn is Audio-Visual Specialist and, as part of his job, is responsible for the local preparation facet of the total instructional resources program. Mr. Dunn initiated the production program with portable museum type materials and is presently expanding his materials and equipment to enable him to provide teachers with a great variety of both projected and non-projected materials. The Brazosport Instructional Resources Center is an excellent example of what classroom teachers can accomplish with a vision and a professional zeal to get the job completed.



PASADENA PUBLIC SCHOOLS
PASADENA, CALIFORNIA



Mr. Charles Reynolds, Supervisor of Audio-Visual Education in the Pasadena Schools, has a highly efficient multipurpose local production program. Mr. Reynolds, a professional artist, has a staff of three full-time persons—an art academy graduate, a junior college graduate with a major in photography, and a model and set builder. This production team is probably the top one in public schools throughout the country in terms of "expertness."

The Pasadena production staff concentrates its production efforts in three areas, namely: classroom instructional materials, materials for television use, and public relations materials. As one would expect, the productions in all three areas are of a very high quality.

Evidence of their expertness has been demonstrated by the high acclaim accorded their visualization of Spanish courses taught over the Los Angeles County Television Network. Mr. Reynolds and his staff assumed the further responsibility for working with the Spanish teacher in developing a highly visualized guide for use by students and teachers viewing the program. This team approach resulted in one of the outstanding educational television series in the country.

The Pasadena local production program is an excellent example of a few experts working in a common facility to produce materials for use in the classroom, on television, and for public relations purposes.

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CHAPTER IV

TEACHER OPINIONS CONCERNING LOCAL PRODUCTION

TEACHER OPINIONS CONCERNING LOCAL PRODUCTION

In Chapter II of this publication the results of administering a nation-wide questionnaire concerning local preparation programs are reported. In most instances the information in these questionnaires was provided by individuals working in an audio-visual supervisory capacity. Recognizing that the data furnished by supervisors do not necessarily reflect the ideas of classroom teachers, the investigators thought that some provision should be incorporated into the study which would enable classroom teachers to express their views concerning the local preparation of visual instructional materials. It was this consideration that prompted the writers to interview a number of classroom teachers at the schools visited. The teachers interviewed were selected primarily because they were the most extensive and effective producers and users of locally prepared visual instructional materials. The actual selections were made by the administrators of the local production programs visited.

During the course of the twenty school visitations, fifty-six classroom teachers and thirteen television teachers were interviewed. Thirty-three of the classroom teachers were from schools with a system-wide local preparation facility while the remaining twenty-three worked in a school building with its own local preparation center. The information obtained during the interviews is reported in the next few pages.

HAVE YOU TAKEN A FORMAL COLLEGE COURSE DEALING WITH THE LOCAL PREPARATION OF INSTRUCTIONAL MATERIALS ?

The responses to this question are presented below in terms of the three administrative units being utilized throughout the study.

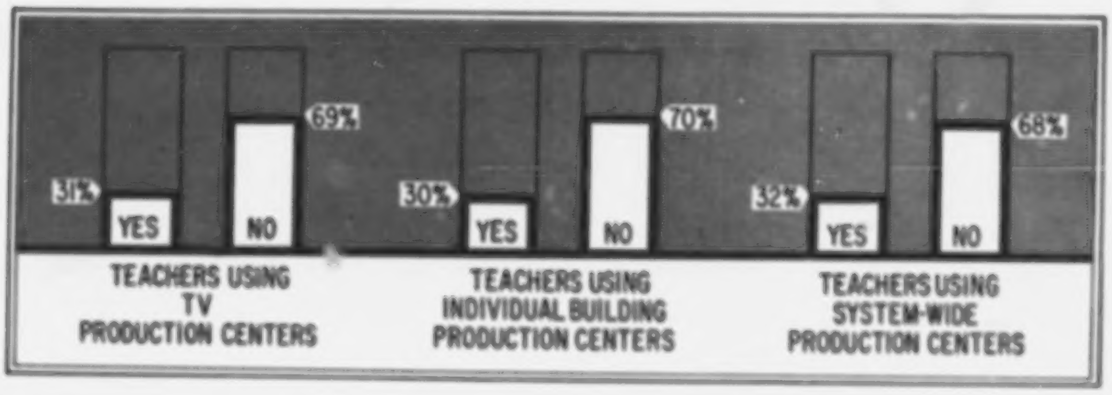


Figure 2. Teacher Responses Indicating Enrollment in a Formal Course in the Preparation of Instructional Materials

Approximately one-third of all teachers interviewed had at some time completed a college course in the area of local production. This would seem to indicate that the completion of a college course in local preparation is not necessarily a prerequisite for effective preparation and utilization of locally produced materials.

Sensing that many teachers had received training in local production in other than formal college courses, the investigators studied the following question.

HAVE YOU ATTENDED ANY SHORT COURSES, CLINICS, OR WORKSHOPS DEALING WITH THE LOCAL PREPARATION OF TEACHING MATERIALS ?

The pattern of responses to the question under consideration (see Figure 3) did not provide sufficient evidence for the writers to draw any definite conclusions concerning the importance of workshops, clinics, or short courses in establishing the local production behavioral patterns present in the teachers interviewed.

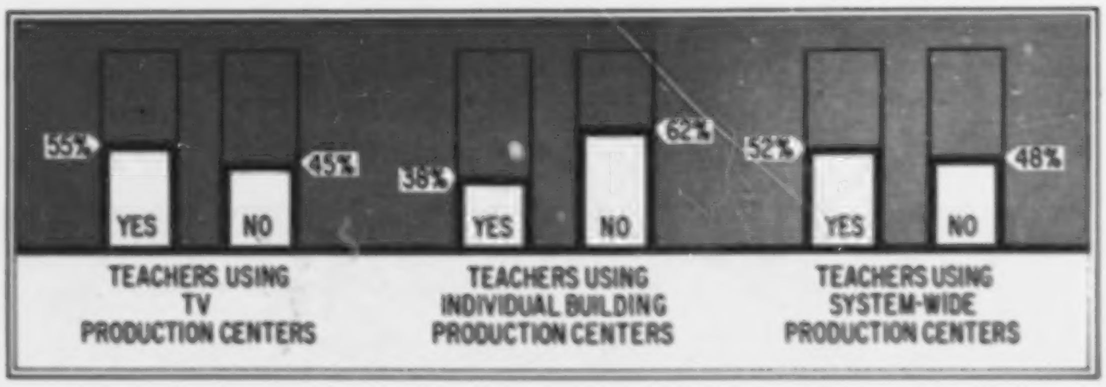


Figure 3. Teacher Responses Concerning Attendance at Any Short Courses, Clinics, or Workshops Dealing with the Local Preparation of Teaching Materials.

Since the two questions analyzed above did not independently indicate a need for formal training to prepare effective practitioners in local production, the responses to the questions were combined to determine whether any significant pattern would emerge. Figure 4 presents this information and shows the percentage of teachers who indicated participation in some type of formal training in the preparation of visual instructional materials.

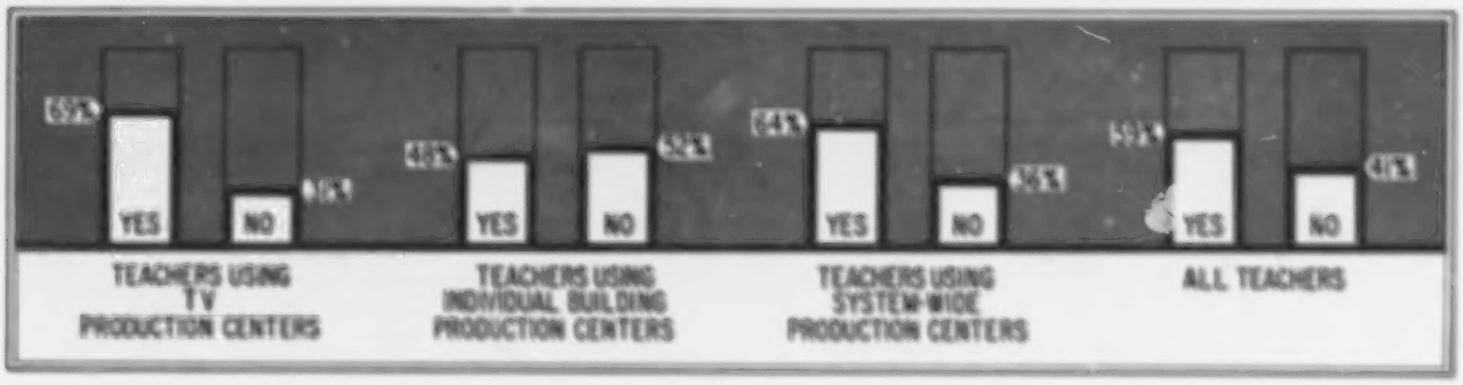


Figure 4. Combined Teacher Responses Indicating Participation in Some Type of Formal Training in the Preparation of Instructional Materials.

Fifty-nine per cent of those teachers who were the most extensive producers and users of locally prepared visual materials had acquired some of their production know-how and motivation as a result of formal courses, workshops, and clinics. However, it should be pointed out that these teachers, along with the 41 per cent who had no formal training, had all been receiving assistance from the audio-visual specialist on a one-to-one working relationship.

Teachers' comments during interviews with the writers further reinforced the necessity for both formal training and individual professional assistance in the preparation of visual materials as a prerequisite for a successful local production program.

WHEN DO YOU MAKE MOST EXTENSIVE USE OF THE LOCAL PREPARATION FACILITIES?

The classroom teachers interviewed indicated that they utilized after-school hours to a much greater extent than any other time to prepare visual instructional materials.

Since the teachers were all from schools with outstanding local production programs, it appears that one characteristic of such programs is teacher willingness to devote after-school time to producing instructional materials they need.

The television teachers were also asked to respond to the question concerning the time of day they utilized the local production facilities most extensively. As might be expected, the preponderance of responses indicated "during the regular school day." The general practice of allocating considerable preparation time for television teachers has probably fostered this situation.

WHAT STATEMENT BEST DESCRIBES YOUR OPINION CONCERNING THE QUANTITY OF LOCALLY PRODUCED MATERIALS AVAILABLE FOR YOUR USE?

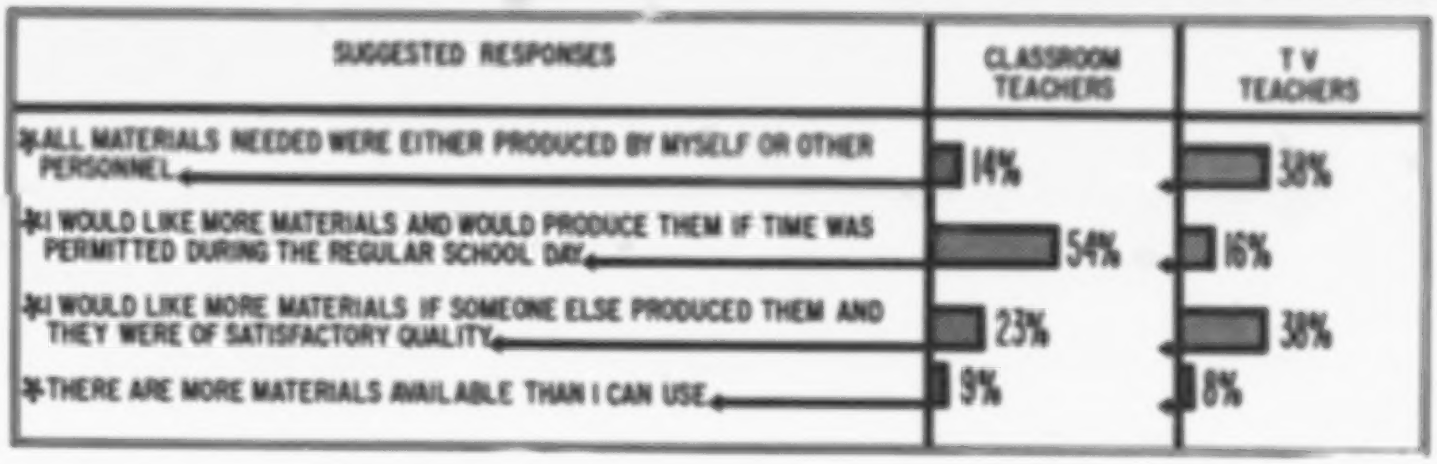


Figure 5. Teacher Responses Concerning the Quantity of Locally Produced Materials Available.

Recorded in Figure 5 are the responses of the fifty-six classroom teachers and the thirteen television teachers to the above question.

The responses to the statements concerning the quantity of materials available for use indicated that a majority of both classroom and television teachers would like to have the opportunity of utilizing more locally produced materials. A large number of classroom teachers stated a preference for preparing the additional materials themselves, if time was allocated during the regular school day for this activity. The television teachers failed to concur with this position. They expressed a need for more materials but preferred that these materials be prepared by someone other than themselves.

Over one-third of the television teachers had all of the locally produced materials they desired, while a much smaller proportion of classroom teachers were in this favorable position. This finding seems to be a reflection of the more desirable teacher-graphic specialist ratio found in the television production programs.

WHAT MAJOR DETERRENTS PREVENT TEACHERS FROM MAKING MAXIMUM USE OF THE LOCAL PREPARATION CENTER?

As reported in Chapter II, respondents to the nation-wide survey indicated that lack of time to prepare materials was the greatest deterrent to an expanded use of local preparation facilities. The classroom teachers confirmed this finding, with thirty-four of the fifty-six teachers interviewed indicating lack of time as the greatest deterrent and lack of knowledge or ability to produce materials as the second greatest deterrent. Television teachers placed lack of time as the second greatest obstacle with lack of knowledge or ability to produce materials as the greatest.

TO WHAT EXTENT HAS PREPARING YOUR OWN TEACHING MATERIALS HELPED YOU GAIN A BETTER UNDERSTANDING OF THE SUBJECT MATTER YOU TEACH?

The responses to the above question are reported in the figure below.

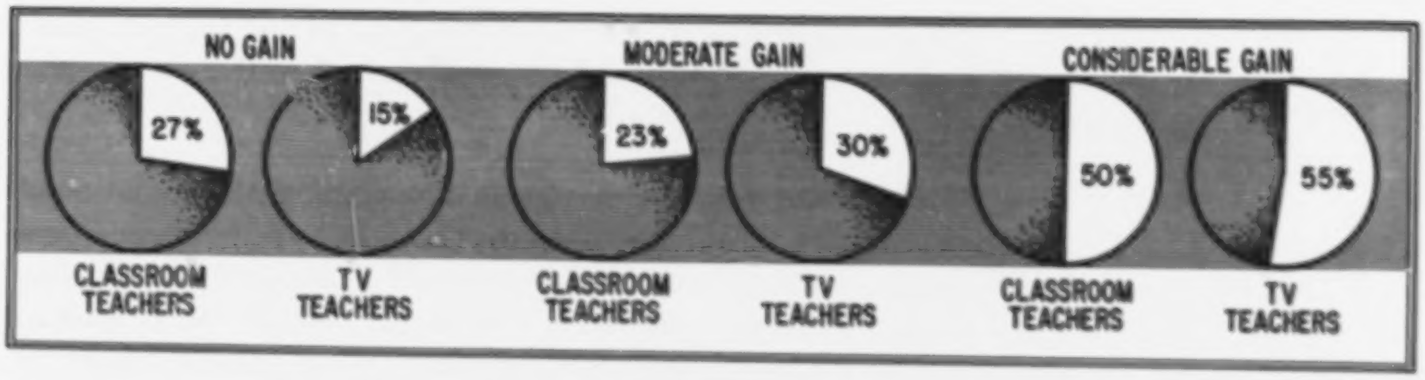


Figure 6. Teacher Responses Concerning Extent to which Personal Preparation of Teaching Materials Helped in Subject Matter Understanding.

Many graphic experts throughout the country adhere to the position that teachers gain new insight into subject content by preparing their own instructional materials. Responses from teachers interviewed confirmed this position, with more than 75 per cent of them indicating either a considerable or moderate gain in understanding of the subject matter they teach as a result of producing their own instructional materials.

TO WHAT EXTENT HAS AN UNDERSTANDING OF GRAPHIC PREPARATION TECHNIQUES INCREASED THE VARIETY OF MATERIALS YOU USE IN YOUR TEACHING ?

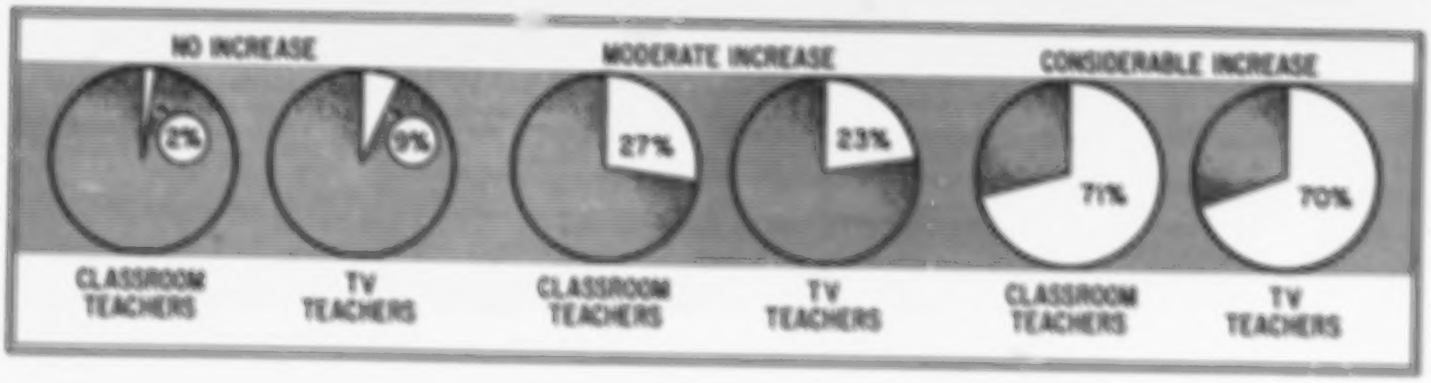


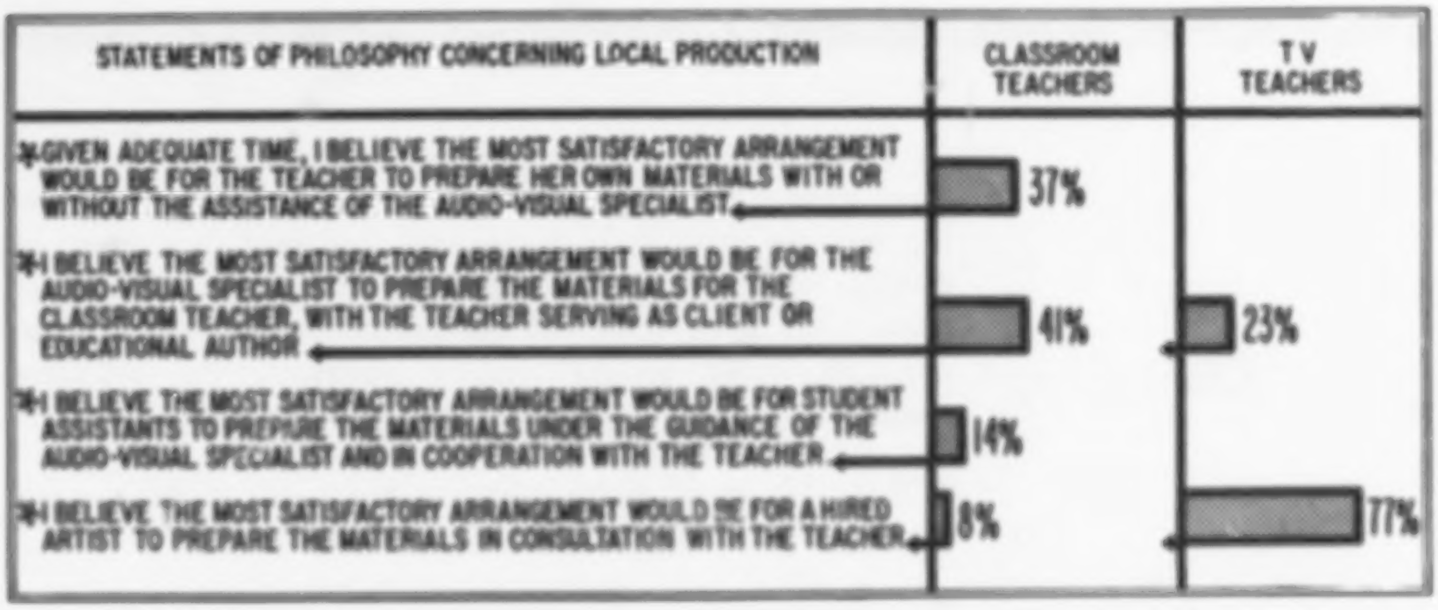
Figure 7. Teacher Responses Indicating the Extent to which an Understanding of Graphic Preparation Techniques Increased the Variety of Materials Used in Teaching.

All but a few teachers who had an opportunity to learn of the possibilities of graphic production techniques applied them in producing an increasing variety of instructional materials useful in their teaching specialties.

WHAT IS YOUR PHILOSOPHY CONCERNING THE MOST DESIRABLE PROCEDURE FOR THE PREPARATION OF NEEDED INSTRUCTIONAL MATERIALS ?

Experts in the graphics field have diverse opinions concerning the best method of getting instructional materials prepared at the local level. Positions held by these persons can be grouped into two basic patterns of production. These are: (1) the teacher prepares his own material with or without the help of another person; and (2) a person skilled in graphic techniques produces the materials, with the teacher serving as the educational author. There are many variations of these positions, but the basic question centers around whether teachers should or should not spend time preparing their own teaching materials.

Since it was obvious that teacher opinions should be considered in making any decision on this issue, the teachers interviewed by the writers were asked to respond to the above question.



STATEMENTS OF PHILOSOPHY CONCERNING LOCAL PRODUCTION	CLASSROOM TEACHERS	T V TEACHERS
GIVEN ADEQUATE TIME, I BELIEVE THE MOST SATISFACTORY ARRANGEMENT WOULD BE FOR THE TEACHER TO PREPARE HER OWN MATERIALS WITH OR WITHOUT THE ASSISTANCE OF THE AUDIO-VISUAL SPECIALIST	37%	
I BELIEVE THE MOST SATISFACTORY ARRANGEMENT WOULD BE FOR THE AUDIO-VISUAL SPECIALIST TO PREPARE THE MATERIALS FOR THE CLASSROOM TEACHER, WITH THE TEACHER SERVING AS CLIENT OR EDUCATIONAL AUTHOR	41%	23%
I BELIEVE THE MOST SATISFACTORY ARRANGEMENT WOULD BE FOR STUDENT ASSISTANTS TO PREPARE THE MATERIALS UNDER THE GUIDANCE OF THE AUDIO-VISUAL SPECIALIST AND IN COOPERATION WITH THE TEACHER	14%	
I BELIEVE THE MOST SATISFACTORY ARRANGEMENT WOULD BE FOR A HIRED ARTIST TO PREPARE THE MATERIALS IN CONSULTATION WITH THE TEACHER	8%	77%

Figure 8. Teacher Responses Indicating Philosophy Concerning the Best Method of Obtaining Locally Produced Visual Instructional Materials.

The classroom teachers had differing opinions concerning the best method of getting visual materials prepared. Approximately one-third preferred to prepare their own materials if given adequate time. The remaining teachers preferred that someone else do the actual production work. When asked who this production person should be, they tended to prefer the audio-visual supervisor or student assistants.

All of the television teachers interviewed expressed a preference for engaging a specialist to prepare the visual materials desired. The great majority thought that a hired artist should be employed to do the work while a very small proportion preferred an audio-visual specialist. In no instance did a television teacher express a desire to do his own production work.

GENERAL CONCLUSIONS CONCERNING LOCAL PRODUCTION PROGRAMS BASED ON TEACHER INTERVIEWS.

1 Both formal courses and personal assistance by an audio-visual specialist seem important elements in motivating teachers to produce and use locally produced visual instructional materials.

2 Generally, both classroom and television teachers would like more locally produced materials for use in their classroom instructional programs. A majority preferred that these additional materials be produced by someone else. The classroom teachers thought that this person should be the audio-visual specialist and/or student assistants; the television teachers expressed a preference for a hired artist.

A sizable number of classroom teachers were willing to produce their own materials if given adequate time.

3 Classroom teachers made the greatest use of the local production facilities after school hours, while television teachers utilized the facilities most extensively during their regular work day.

4 Three-fourths of the teachers indicated that they had gained in understanding of their subject matter as a result of producing their own visual instructional materials.

5 Teachers were almost unanimous in indicating that a knowledge of graphic techniques enabled them to produce an increasing variety of instructional materials useful in classroom instruction.

THE TEACHERS HAVE SPOKEN

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CHAPTER V

SPECIFIC RECOMMENDATIONS FOR INITIATING AND EXPANDING LOCAL PRODUCTION PROGRAMS

SPECIFIC RECOMMENDATIONS FOR INITIATING AND EXPANDING LOCAL PRODUCTION PROGRAMS

> "Would you tell me, please, which way I ought to go from here?"
> "That depends a good deal on where you want to get to," said the Cat.
> "I don't much care where—" said Alice.
> "Then it doesn't matter which way you go," said the Cat.
> "—so long as I get *somewhere*," Alice added as an explanation.
> "Oh, you're sure to do that," said the Cat,
> "If you only walk long enough."
>
> Lewis Carroll, *Alice in Wonderland*

While the Alice of *Alice in Wonderland* may not have needed to be too concerned about where she was going, today American educators are well aware that they cannot be satisfied with just getting "somewhere." This "somewhere" must be the shortest and most immediate road to optimal educational practices.

Achieving such a goal requires careful planning of each aspect of the total instructional program. Obviously such planning must be preceded by a clear delineation of specific program objectives.

* OBJECTIVES OF A LOCAL PRODUCTION PROGRAM

What should these objectives be for a program of local production designed to provide instructional materials for various school personnel?

The authors think that the major objectives of a local production program should be:

● I. To provide faculty with those instructional materials needed for effective instruction but not available commercially—

For direct use by the teacher in the classroom.

For use by the teacher in the classroom with the aid of closed-circuit television for enlarging or emphasis.

For use by classroom or special teachers in closed-circuit programs originating outside of the classroom.

For use by television teachers in broadcast television programs originating outside of the classroom.

Here are a few examples illustrating such uses which the writers noted as they visited schools with outstanding programs in local production:

1. A young, first-year English teacher in Roswell, New Mexico, developing and using more than one hundred 10 x 10 overhead transparencies to teach grammar to senior high school students.

2. An impressive number of elementary teachers in Battle Creek, Michigan, using locally produced visual materials not only for bulletin boards and

opaque projector sets but also for felt board kits, electric boards, magnetic boards, and flip charts.

3. The entire mathematics department at Malcolm Price Laboratory School, Cedar Falls, Iowa, producing and collectively pooling and cataloguing 10 x 10 overhead transparencies for teaching both modern and traditional mathematics concepts.

4. A teaching team in the social studies area at Wayland High School, Wayland, Massachusetts, using numerous 2 x 2 color slides with recordings of poetry and musical scores to give pupils a better understanding of the Civil War era.

5. The Spanish television teacher, foreign language supervisor, and audio-visual center production specialists at Pasadena, California, planning and developing a rotating scale model of a Spanish home, felt board materials, and other visual materials to use in telecasting the course; then developing a highly visualized manual to aid the teachers in conducting follow-up activities related to the television lessons.

● II. To provide students with the visual instructional materials they need to solve various communication problems—

For classroom reports to other students.

For individual reports submitted to their instructors.

For science fair exhibits, yearbook illustrations, posters, and announcements of school events.

It was exciting to see students actually using the local production facilities for so many varied educational purposes. Here are just a few instances of such student activities:

1. Elementary students at the Malcolm Price Laboratory School, Cedar Falls, Iowa, using mounting, lettering, and coloring equipment and materials to prepare their unit displays.
2. Members of the student yearbook club at the Powell High School, Powell, Wyoming, utilizing the audio-visual center's production facilities to produce almost all visuals and art work included in their publication.
3. At Fenton High School, Bensonville, Illinois, mathematics students making more than one hundred transparencies for use in class presentations of problem solutions, for specific individual class assignments and for extra credit projects.
4. A science student at Powell High School, Powell, Wyoming, utilizing the photographic knowledge she learned while in the audio-visual student assistant program to make a visual record of the progressive stages of her biology experiment. This visual documentation helped her more clearly explain her experiment to her classmates.

● III. To provide visual instructional materials needed by school administrative and supervisory staff in presenting information—

To the school faculty at teachers' meetings, workshops, seminars, and in-service training sessions.

To the school board and other school advisory committees.

To the lay public, parent-teacher groups, and various citizen committees.

The authors found that a majority of the local production programs they visited were fulfilling a real need in assisting school administrators and supervisors in fulfilling their communication responsibilities. Below are a few examples of the way in which the audio-visual communication specialist was contributing in this area:

1. The production staff of the Audio-Visual Center at Pasadena, California, was producing numerous brochures and informational pamphlets on all aspects of the school program.

2. At Medford, Oregon, the Curriculum Materials Center reports revealed the following county offices using the facilities: Agriculture and Home Economics Extension Service, Child Guidance Clinic, Health Department, Planning Commission, Civil Sheriff, Criminal Sheriff, and the Welfare Commission.

3. At Penfield, New York. the Audio-Visual Director worked with an elementary principal and a parent with photographic know-how to produce a 2 x 2 sound, color slide set to show parents what a typical day was like for their primary school children.

4. At Fenton High School, Bensonville, Illinois, the Audio-Visual Director prepared a packet of 10 x 10 overhead transparencies that are used throughout the year by the guidance counselors to explain registration forms, test instructions,

scoring methods, etc. to high school students. Through cooperative efforts, a 16mm magnetic sound film has also been produced to inform new students of guidance department services.

5. In interviews with school superintendents, the authors were told on numerous occasions of the contributions the audio-visual specialist had made in preparing visual materials for their use for lectures, television appearances, and presentations at group meetings concerned with solicitation of financial support for the school program.

As educators become aware of the many contributions a well-organized local production program can make to a classroom learning environment, there undoubtedly will be a rapid growth in the number of such programs throughout the country. If this prediction becomes a reality, there will be an urgent need for direction and guidance for those individuals assigned the responsibility of establishing local production programs. Recognizing the paucity of information on this topic, the researchers have suggested, in the pages that follow, an approach to the creation of a functional local production program. The suggestions offered have been derived in part from information gained in conducting this study and from consultation with many graphics experts throughout the United States.

It would be impossible to recommend an organizational approach for a public school local production program which would fulfill the requirements of all schools. It is recognized that in some instances production programs are operated at the school building level only; others have system-wide centers that serve all school personnel; and, in still other situations, there are operative programs that serve both the building and system level. To complicate the picture further, school systems which utilize educational television have in many instances designed a local production program specifically for television teachers. Confronted with these and other possible audiences to be served—each with their particular and specialized needs in terms of locally produced materials—the writers have attempted to identify those components of a local production program that appear to be common and essential elements regardless of the location of the facilities or the nature of the clientele being served. The common components envisioned by the writers can be best categorized, first, in terms of the types of local production activities that are basic to any program; and, second, according to the equipment and materials, facilities, and personnel needed to enable one to perform these activities. On the pages that follow, an attempt has been made to delineate the more pertinent concerns relative to the organizational approach suggested above.

BASIC COMPONENTS OF A LOCAL PRODUCTION PROGRAM

Within any basic local production program provisions should be made to conduct the following types of activities: illustrating, mounting, lettering, coloring, photography, and duplicating. Eliminating any one of these functions would reduce the potential of the other five; however, combining all six activities enables one to produce an unlimited variety of instructional materials. To clarify the terms utilized in specifying the basic activities above, the authors make the following brief statement defining each.

Illustrating

Most visuals require some type of original art work. Whether this work is a free-hand drawing, a picture from a clip book, or a tear sheet, it would fall under the heading of illustrating. This activity would also include any finished visuals which did not involve the other five activities in the production. An example would be a hand-made lantern slide (traced or hand-drawn) or an illustration on an overhead transparency made with India ink.

Mounting

The term "mounting" applies primarily to those processes which can be utilized to make one surface adhere to another, such as attaching a picture from a magazine to a piece of cardboard. Also included in this area would be the picture transfer process which enables one to transfer the printer's ink from a magazine picture to a clear piece of acetate. Another type of activity that would be classified as mounting would be "passe partout mounting." This technique involves framing flat or three-dimensional objects. Normally the frame has a glass or acetate cover. Sealing or laminating materials with plastic would also be classified as a mounting technique.

Lettering

Lettering as used here includes all types of mechanical lettering devices and commercially prepared letters. The emphasis is actually away from the free-hand letter to the mechanically produced or commercially prepared letter. The T-square, triangle, and other drawing instruments will be used extensively in this area.

Coloring

Coloring includes a variety of processes. The emphasis, however, is placed on those methods of coloring that are inexpensive. Examples of the types of materials used for this purpose would be India inks, plastic inks, water colors, and colored pencils. The more "elaborate" methods would include the air brush, colored adhesives, and diazo.

Photography

Photography as we know it today includes a great range of reproduction possibilities for enlarging or reducing materials. For the purposes of the basic local production program, the term will be defined to include the more commonly known photographic techniques. Such terms as "high contrast photography," "35mm and Polaroid copy stands," and "view cameras" will be heard frequently in the local production center.

Duplicating

The familiar spirit and mimeograph techniques are methods of duplicating that will be found in the local production center. The newer diazo and various heat processes for duplicating materials would also be included in this activity. The emphasis here is placed on reproduction possibilities other than the types of photographic techniques mentioned above.

With the six basic production activities briefly defined, it is now possible to make note of the types of equipment and materials recommended to conduct these activities. Listed below are the recommended equipment and materials for a basic local production program. Where possible, an estimated range in cost for each item is provided.

The amount of equipment and materials one would provide in a local production center will vary in accordance with the level of development of the program. The recommendations herein apply only to the initial program and should be expanded as the program grows.

Illustrating	Minimum Cost	Maximum Cost
Purchased art illustration materials and other equipment and supplies	$25.00	$100.00
Mounting		
Dry mounting press	65.00	360.00
Tacking iron	8.00	28.00
Cutting board	35.00	80.00
Dry mounting tissue	23.00	23.00
Laminating materials	15.00	15.00
Mounting cloth	15.00	15.00
Paste, glue, etc. and dispensers	20.00	20.00
Misc. supplies	25.00	50.00
	206.00	591.00
Lettering		
Mechanical lettering devices and/or stencil with special tracing pen	50.00	80.00
T-Square	.70	18.00
Drafting table	14.00	275.00
Commercially prepared letters Cut-out Gummed back Stencil	40.00	40.00

Acetate	25.00	25.00
Cardboard	30.00	30.00
Inks	15.00	15.00
Misc. supplies	25.00	50.00
	199.70	533.00
Coloring		
Air brush	18.00	150.00
Inks (acetate and drafting)	10.00	10.00
Water colors (opaque and transparent)	12.00	12.00
Colored pencils	4.00	4.00
Felt-tip pens	5.00	5.00
Misc. supplies	15.00	25.00
	64.00	206.00
Photography		
Polaroid camera and copy stand	195.00	300.00
35mm camera and copy stand	75.00	500.00
Large copy camera and copy stand	150.00	450.00
Equipped darkroom	500.00	2500.00
Photographic supplies	200.00	400.00
Misc. equipment	50.00	150.00
	1170.00	4300.00
Duplicating		
Spirit Duplicator	65.00	150.00
Stencil duplicator	65.00	650.00
Light Table	35.00	260.00
Copy machine (one only) Diazo or photo or heat	200.00	500.00
Misc. supplies	25.00	25.00
	390.00	1585.00
TOTAL	2054.70	7315.00

As noted above, the equipment and materials for starting a local production center at the recommended level requires a nominal outlay of cash. If relatively inexpensive equipment and materials are used, the initial minimum cost would be around $2200. To equip a center with some of the best items available would run the cost above $7000. From these figures, it seems reasonable to assume that an adequate supply of equipment and materials for a good local production program could be provided for approximately $3500.

In certain situations it may be impossible to develop the recommended program in its entirety. If this is the case, the logical developmental pattern would seem to be to start with the illustration, mounting, lettering, and coloring areas first and then follow with the photographic and duplicating areas as space and funds become available. This approach is recommended only when the entire pattern cannot be adopted from the beginning. As mentioned previously, the six areas are functionally interrelated and cannot be utilized maximally if any one area is not developed.

A school or school system is not limited to the materials and equipment suggested on the preceding pages for a basic local production program. A wide variety of instructional materials can be produced within the range of possibilities afforded by the basic program. However, there are many other types of equipment and materials on the market that would enable one to produce a greater variety of visuals, produce them in greater quantities and in many cases produce visuals of better quality. A number of these possible additions are listed below.

Mounting	Estimated Cost Range
Laminating machine	$150-$400
Lettering	
Primary typewriter	150- 250
Photo-titler	200-1500
Emboss printing machine	600-1200
Coloring	
Colored adhesive	25- 50
Photography	
8mm motion picture camera	40- 500
16mm motion picture camera	120-1000
Filmstrip camera	70- 300
Slide reproducer	150- 350
Process camera	500-1000
Other cameras	25- 750
Duplication	
Silk screen	35- 500
Offset	1200-4000
Proofing presses	500-1000
Xerox	2500-4000
Electronic stencil reproducer	1800-2000

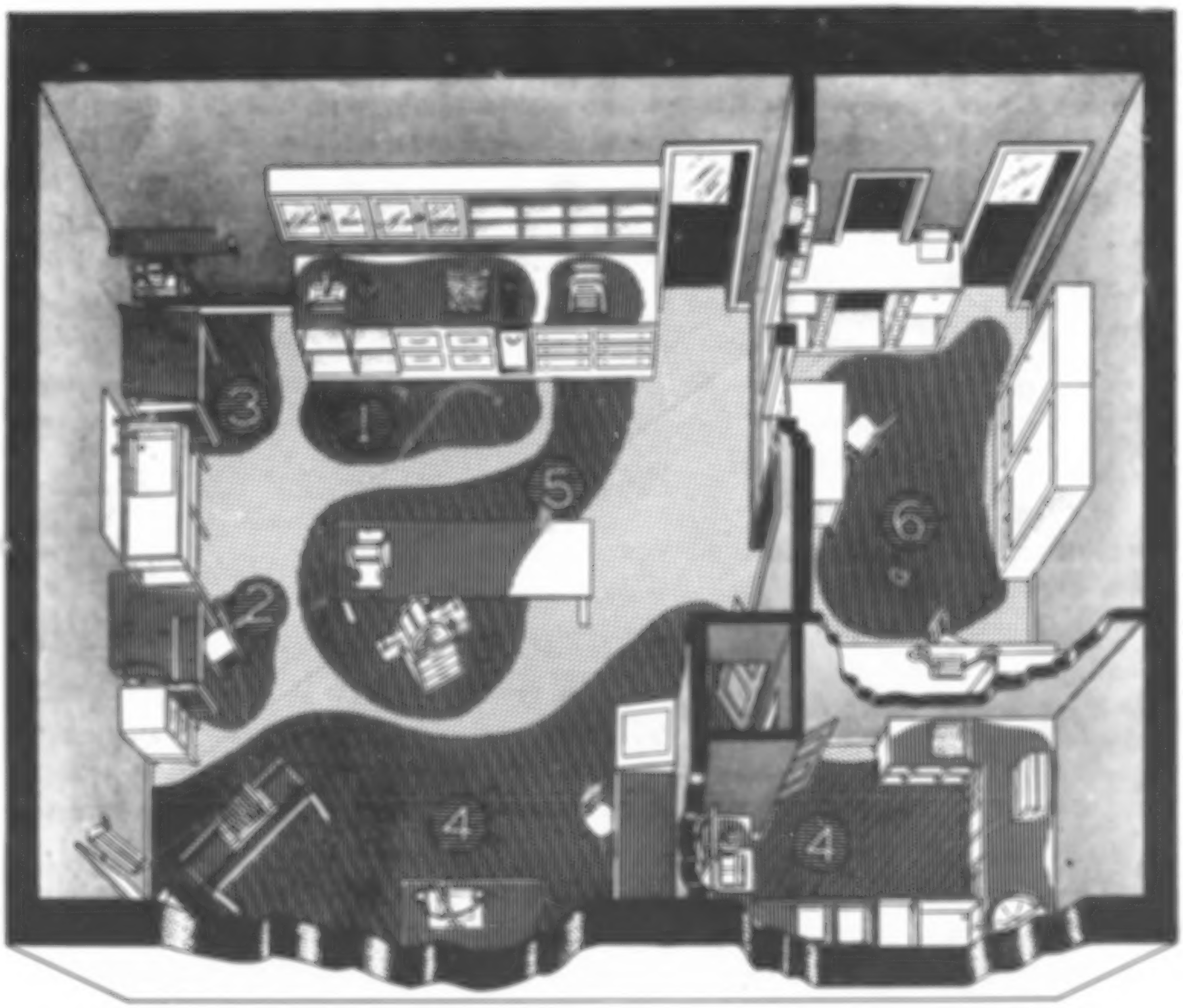
The above information provides additional evidence of the great potential of a well-equipped local production program. The items above plus the elements recommended for a basic program do not make an all-inclusive list of the equipment and materials available for local production. New materials and equipment are appearing on the market constantly. This makes it extremely difficult to "stay up-to-date." Any school or school system, however, which secures all of the equipment and materials listed in this publication and uses them extensively will have available an unlimited supply of instructional materials.

FACILITIES—THE SECOND COMPONENT

The recommended equipment and materials for a local production program would be of little value without facilities in which to house them. In connection with the question of space, Figure 11 presents a suggested structural design for a local production center. This design has been conceptualized in terms of six functional areas that are essential for the program recommended by the writers. As noted in Figure 11, these areas are mounting, lettering, coloring, photography, duplicating, and consultation and supervision.

The question concerning square footage to be allocated for a local production center would be a logical one to raise at this point. It is difficult to specify square footage needs in terms of such commonly utilized standards as number of teachers or student enrollment. Consequently, it is suggested in Figure 11 that an acceptable facility would include a minimum of 1260 square feet, which is based on the space needs for housing the six activities mentioned above. Within this recommended space a highly successful local production program could be developed.

A school or school system interested in allocating space in excess of the 1260 square feet mentioned above could gain valuable information on the utilization of the space by reading the case studies in this publication. The darkroom area, for example, is a rather simple arrangement in the recommended program. Those interested in a more elaborate darkroom could benefit from the floor plan included for the center at Powell, Wyoming. Likewise, if an in-service education program is to be conducted or a class in photog-



1—Mounting	4—Photography
2—Lettering	5—Duplicating
3—Coloring	6—AV Specialist's Office

Figure 11. Recommended Facilities for a Basic Local Production Program.

raphy taught, the demonstration area in the Medford, Oregon, center as well as the Powell instructional area would be worth studying. Examples of other facilities more elaborate than those recommended for a basic local production program can be found in certain of the case studies reported in Chapter III of this publication. The audio-visual specialists and school administrators in the schools with these outstanding facilities are to be commended for their work and have set a standard that other schools and school systems should strive to reach. However, the writers think that—as highly desirable as these special facilities are—an adequate local production program can be conducted within the facilities shown in Figure 11.

PERSONNEL—THE THIRD COMPONENT

Throughout this study one common feature noted in analyzing the better local production programs was the fact that the individual responsible for the creation and development of the program possessed an abundance of that quality generally referred to as "leadership." In fact, there appeared to be a high correlation between the overall effectiveness of a local production program and the drive, initiative, creativity, and personality of the person in charge of the program. Of equal, if not greater importance was the relationship noted between the quality of program and the amount of time allocated to the audio-visual specialist to supervise local production activities. Although no highly definitive pattern of time allocation was noted from the information secured during the study, a rather consistent developmental approach to supervision was noted.

The audio-visual specialist (supervisor, coordinator, director) was typically responsible for the leadership function in most local production centers. Initially this task was performed on a part-time basis, with no more than one-fourth to one-fifth of his time devoted to the local production aspects of the audio-visual program. As teachers, students, and administrators become more frequent users of the production facilities and services, the amount of time devoted to the program by the director increases somewhat but not to any great extent. To meet the increased demand for services and materials, the emerging pattern indicates that a graphics expert is added to the staff at this point or audio-visual student assistants become more active in the program. The director continues to coordinate the program but divorces himself more and more from any direct production activities.

Any attempt to indicate specifically the personnel needs for developing and operating a local production program would have to be regarded as an intelligent guess, particularly at this stage of development of the field. However, in an effort to provide as much guidance as possible, the writers have "gone out on a limb" and, from observations made during the course of this study recommend that a working ratio between graphics specialist and teachers be in the neighborhood of 1 to 200.

The authors are cognizant of the many variables that could make this recommendation a very unrealistic one; but, by the same token, a point of departure must be identified before progress can be made. It is assumed that as the local production field matures, a more objective and defensible standard can be established. However, the ratio suggested appears to provide a good starting point based upon present practices.

The more important consideration at this stage in the development of the local production field is the allocation of sufficient time during the regular school day for a competent audio-visual specialist to establish the program. Once established and in operation, the recommended ratio can serve as a tentative guideline for hiring personnel to meet the instructional needs of the staff.

* AN ORGANIZATIONAL PATTERN FOR A LOCAL PRODUCTION PROGRAM

As educators, we are all desirous of finding better techniques, methods, and organizational patterns which make it possible for us to improve our teaching. Undoubtedly we are entering into a period when educators on all levels will have to become increasingly skilled at combining teaching personnel, materials, and technological innovations to produce optimum learning. Possibly the "systems approach to instruction" mentioned in the first chapter will become the major educational concern of this decade.

Any successful "systems approach" of necessity will make major use of a combination of educational media designed for large-group instruction and media prepared for individual and small-group use.

We know from experiences with team teaching and instructional television that a considerable amount of the visual instructional materials desired for this type of instruction must be produced locally if instructors are to receive help in achieving their specific instructional objectives.

An integral part of any systematic design in education must be provision for a local production program. The investigators found such functioning programs making important contributions by providing visual teaching materials for use in the classroom and television studio. Production facilities were even being used in the local development of programmed learning materials.

In Figure 12 the authors suggest a "sub-system" organizational approach by which audio-visual specialists, teachers, and students who possess basic production techniques can—if provided the necessary production materials, equipment, and facilities—develop essential, locally produced visual materials for use in instruction, in-service training, and public relations activities.

The authors think that this suggested organizational approach to local production, when wisely adapted to meet local needs, will prove worthy of the time, money, and effort expended.

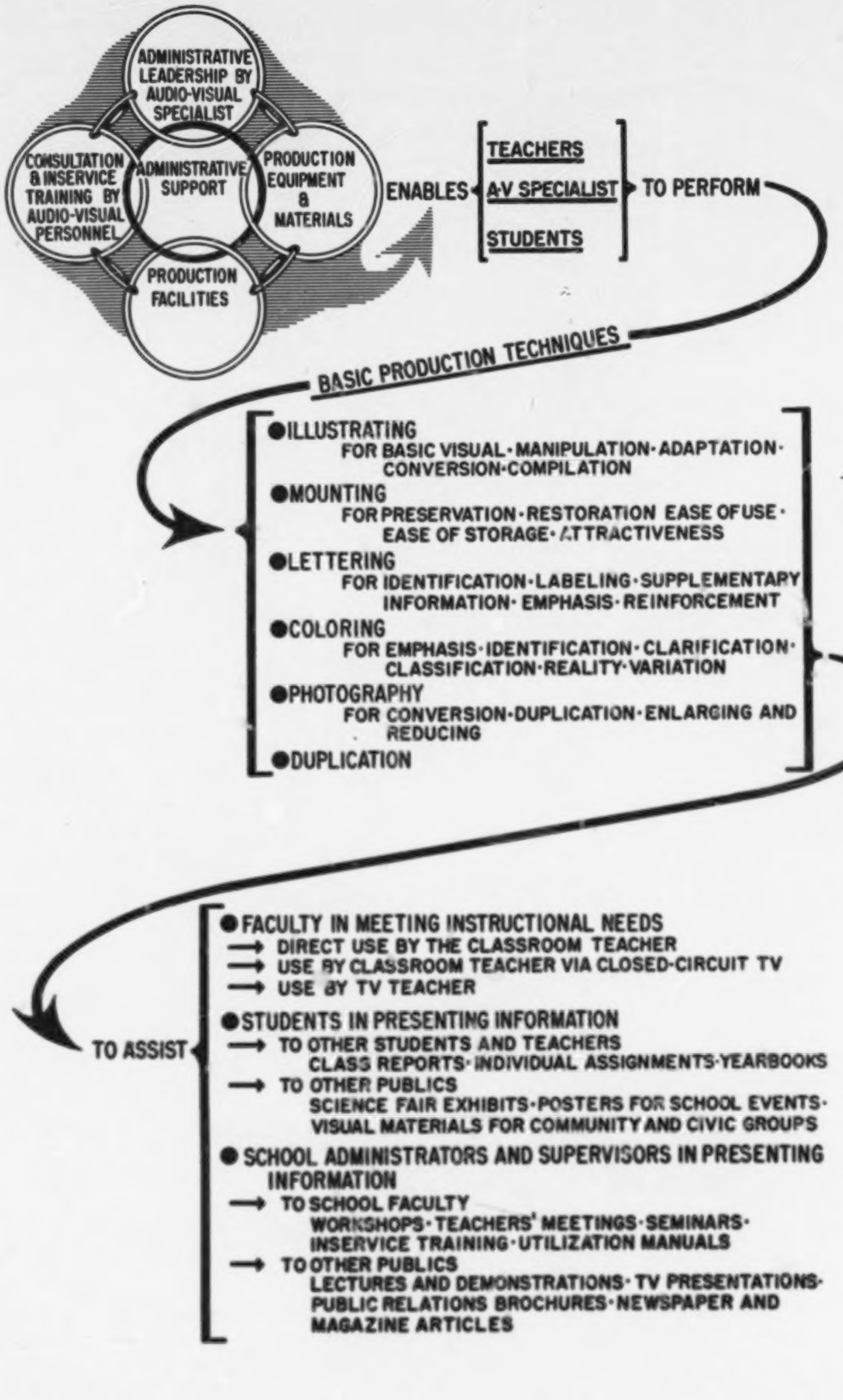

ADMINISTRATIVE LEADERSHIP BY AUDIO-VISUAL SPECIALIST
CONSULTATION & INSERVICE TRAINING BY AUDIO-VISUAL PERSONNEL
ADMINISTRATIVE SUPPORT
PRODUCTION EQUIPMENT & MATERIALS
PRODUCTION FACILITIES
ENABLES
TEACHERS
A-V SPECIALIST
STUDENTS
TO PERFORM
BASIC PRODUCTION TECHNIQUES
●ILLUSTRATING
FOR BASIC VISUAL·MANIPULATION·ADAPTATION·CONVERSION·COMPILATION
●MOUNTING
FOR PRESERVATION·RESTORATION EASE OF USE·EASE OF STORAGE·ATTRACTIVENESS
●LETTERING
FOR IDENTIFICATION·LABELING·SUPPLEMENTARY INFORMATION·EMPHASIS·REINFORCEMENT
●COLORING
FOR EMPHASIS·IDENTIFICATION·CLARIFICATION·CLASSIFICATION·REALITY·VARIATION
●PHOTOGRAPHY
FOR CONVERSION·DUPLICATION·ENLARGING AND REDUCING
●DUPLICATION
TO ASSIST
● FACULTY IN MEETING INSTRUCTIONAL NEEDS
→ DIRECT USE BY THE CLASSROOM TEACHER
→ USE BY CLASSROOM TEACHER VIA CLOSED-CIRCUIT TV
→ USE BY TV TEACHER
●STUDENTS IN PRESENTING INFORMATION
→ TO OTHER STUDENTS AND TEACHERS
CLASS REPORTS·INDIVIDUAL ASSIGNMENTS·YEARBOOKS
→ TO OTHER PUBLICS
SCIENCE FAIR EXHIBITS·POSTERS FOR SCHOOL EVENTS·VISUAL MATERIALS FOR COMMUNITY AND CIVIC GROUPS
● SCHOOL ADMINISTRATORS AND SUPERVISORS IN PRESENTING INFORMATION
→ TO SCHOOL FACULTY
WORKSHOPS·TEACHERS' MEETINGS·SEMINARS·INSERVICE TRAINING·UTILIZATION MANUALS
→ TO OTHER PUBLICS
LECTURES AND DEMONSTRATIONS·TV PRESENTATIONS·PUBLIC RELATIONS BROCHURES·NEWSPAPER AND MAGAZINE ARTICLES

Figure 12. An Organizational Pattern for a Local Production Program.

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APPENDIX B

A LIST OF FILMS AND FILMSTRIPS PERTAINING TO LOCAL PRODUCTION

Films

ABC OF PUPPET MAKING, TYPE I
Bailey Films, 1954, 11 minutes, black & white, sound.

ABC OF PUPPET MAKING, TYPE II
Bailey Films, 1954, 11 minutes, black & white, sound.

BASIC MOTION PICTURE TECHNIQUES
Sterling Films, 1949, 32 minutes, black & white, sound.

BASIC PRINCIPLES OF FILM EDITING
American Cinema Editors, 1958, 8 minutes, black & white, sound.

BASIC PORTRAITURE LIGHTING
United World Films, 1951, 15 minutes, black & white, sound.

BETTER BULLETIN BOARD
Indiana University, 1956, 13 minutes, black & white or color, sound.

BULLETIN BOARDS: AN EFFECTIVE TEACHING DEVICE
Bailey Films, 1956, 11 minutes, color, sound.

BULLETIN BOARDS FOR EFFECTIVE TEACHING
Iowa State University, 1953, 10 minutes, color, sound.

CHALK AND CHALKBOARDS
Bailey Films, 1959, 15 minutes, color, sound.

COMPOSITION FOR PHOTOGRAPHY
Iowa State University, 1959, 10 minutes, black & white, sound.

CONTROLLED PHOTOGRAPHIC LIGHTING
Indiana University, 1959, 10 minutes, black & white, sound.

CREATING CARTOONS
Bailey Films, 1955, 10 minutes, black & white, sound.

DEVELOPING THE NEGATIVE
United World Films, 1948, 16 minutes, black & white, sound.

DRY MOUNT YOUR TEACHING PICTURES
McGraw-Hill, 1958, 10 minutes, black & white, sound.

DUPLICATING BY THE SPIRIT METHOD
Bailey Films, 1958, 15 minutes, color or black & white, sound.

EXPOSURE
Indiana University, 1959, 10 minutes, black & white or color, sound.

FLANNEL BOARDS AND HOW TO USE THEM
Bailey Films, 1958, 15 minutes, color, sound.

FLANNELGRAPH
University of Minnesota, 1956, 27 minutes, color, sound.

HANDMADE MATERIALS FOR PROJECTION
Indiana University, 1955, 20 minutes, black & white or color, sound.

HIGH CONTRAST PHOTOGRAPHY FOR INSTRUCTION
Indiana University, 1956, 12 minutes, black & white or color, sound.

HOW TO DO CARTOONS
Schulman, 1957, 20 minutes, black & white, sound.

HOW TO MAKE A PUPPET
Bailey Films, 1953, 12 minutes, black & white or color, sound.

HOW TO MAKE AND USE A DIORAMA
McGraw-Hill, 1956, 20 minutes, black & white or color, sound.

HOW TO MAKE HANDMADE LANTERN SLIDES
Indiana University, 1947, 21 minutes, black & white or color, sound.

LET'S MAKE MOVIES
Eastman Kodak, 1954, 17 minutes, color, sound.

LETTERING INSTRUCTIONAL MATERIALS
Indiana University, 1955, 20 minutes, black & white or color, sound.

MAGAZINES TO TRANSPARENCIES
Florida State University, 1958, 12 minutes, color, sound.

MAKING FILMS
Library Films, 1952, 10 minutes, black & white, sound.

MIMEOGRAPHING TECHNIQUES
Bailey Films, 1958, 15 minutes, color or black and white, sound.

PASSE PARTOUT FRAMING
Indiana University, 1956, 10 minutes, black & white or color, sound.

PHOTOGRAPHIC SLIDES FOR INSTRUCTION
Indiana University, 1956, 10 minutes, black & white or color, sound.

PICTURES CLEAR AND SHARP
Eastman Kodak, 1956, 12 minutes, color, sound.

POSTER MAKING: DESIGN AND TECHNIQUE
Bailey Films, 1953, 10 minutes, color, sound.

POSTER MAKING: PRINTING BY SILK SCREEN
Bailey Films, 1953, 15 minutes, color, sound.

PRINTING THE POSTIVE
United World Films, 1948, 19 minutes, black & white, sound.

SO CAN YOU
Eastman Kodak, 1956, 12 minutes, color, sound.

TECHNIQUE OF THE SILK SCREEN PROCESS
Brandon Films, 1940, 15 minutes, black & white, sound.

WET MOUNTING PICTORIAL MATERIALS
Indiana University, 1952, 11 minutes, black & white or color, sound.

RELIEF MODELS
David Lipscomb College, 1955, 10 minutes, color, sound.

Filmstrips

BULLETIN BOARDS AT WORK
Wayne State University, 1950, 42 frames, black & white, sound.

FILMSTRIP PREPARATION
United World Films, 1942, 78 frames, black & white, silent.

HOW TO KEEP YOUR BULLETIN BOARD ALIVE
Teaching Aids Service, 1950, 33 frames, color, sound.

HOW TO MAKE AND USE THE FELTBOARD
Teaching Aids Service, 1955, 54 frames, color, sound.

HOW TO MAKE RELIEF MAPS
United World Films, 1953, 36 frames, color, silent.

MAKING GEOGRAPHIC MODELS
Teaching Aids Services, 1957, 55 frames, color, silent.

MOUNTING PICTURES
University of Texas, 1956, 58 frames, color, silent.

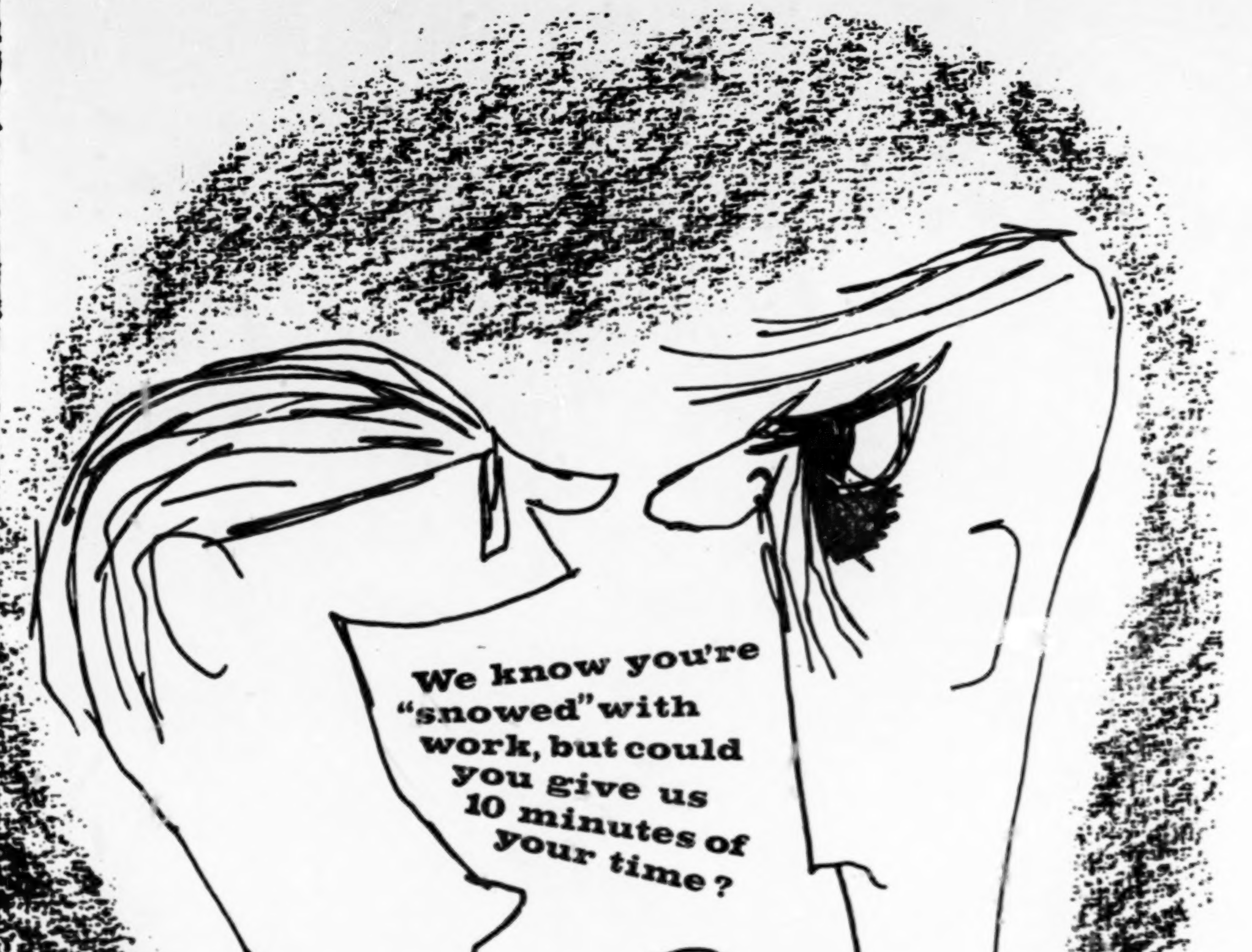
PHOTOGRAPHIC DARK-ROOM PROCEDURE
McGraw-Hill, 1950, black & white, silent.

SILK SCREEN PRINTING
Visual Education Consultants, 1958, 31 frames, black & white, silent.

SIMPLE EXHIBIT TECHNIQUE
Teaching Aids Services, 1957, 40 frames, color, sound.

SIMPLE SILK SCREEN TECHNIQUES
Syracuse University, 1955, 51 frames, black & white, silent.

SIMPLIFIED FILMSTRIP PRODUCTION
Teaching Aids Services, 1952, 40 frames, black & white, silent.


We know you're "snowed" with work, but could you give us 10 minutes of your time?

faris - moldstad NDEA research project

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QUESTIONNAIRE CONCERNING SCHOOL OR SCHOOL SYSTEM

AUDIO-VISUAL PREPARATION CENTER

Name ______________________________ Address ______________________________

School or School System ______________ ______________________________

1. Is there a centralized audio-visual preparations center with designated space, equipment, and materials in the school or school system listed above?
YES NO (Circle One)

Answer the remaining questions only if the answer to question #1 is "yes".

2. From the items below check the one statement that best describes the preparations center in the school and school system listed above.

___ A. An individualized school building preparation center.

___ B. A centralized preparation center serving all buildings in a school system.

___ C. A special preparation center for producing materials for television use only.

3. Who produces materials within the framework of the statement checked under item #2? Place a (1) beside the statement which indicates the group that uses the preparation facility most extensively, a (2) for the second most extensive user and (3) for the third most extensive user, and so forth. (Do not rank non-users)

___ Classroom teacher with assistance of the audio-visual coordinator.

___ Television teacher with assistance of the audio-visual coordinator.

___ Audio-Visual coordinator in consultation with the teacher.

___ Student assistants under the supervision of the audio-visual coordinator and in consultation with the teacher.

___ Hired artist in consultation with the television teacher.

___ Hired artist in consultation with the classroom teacher.

___ (Other) LIST

4. Which of the following materials are being produced IN THE SCHOOL OR SCHOOL SYSTEM you are evaluating? (Please indicate the producer - teacher, student, etc. - and the approximate number of each kind of material produced during the 1959-60 school year.)

PRODUCTION ACTIVITIES	Who Produces				NUMBER OF MATERIALS BEING PRODUCED					
	Teachers	Students	A-V Specialist	Hired Artists	None	1-10	11-20	21-50	51-100	Over 100
Photographs										
Graphic Materials (Charts, Poster, etc.)										
Mounted Pictures										
Mounted Specimens										
Models										
Exhibits, Dioramas and Murals										
Flannel Boards										
Flannel Board Material Sets										
2 x 2 Slides										
3¼ x 4 Slides										
Filmstrips										
Motion Pictures										
Overhead Transparencies 7 x 7 - 10 x 10										
Others (Please list)										

5. What types of audio-visual preparation equipment, materials, and facilities are available in the local preparation center in the school or school system you are evaluating? Place an (x) in the space provided if the item applies.

MOUNTING

___ Dry mount press and dry mount tissue

___ Laminating machine and materials

___ Muslin or commercial mounting cloth (Chartex)

___ Materials for framing with tape (Passe Partout Framing)

___ Materials for three-dimension display

Others (list)

___ ______________________________

___ ______________________________

COLORING

___ Air brush and inks

___ Commercial adhesive materials

___ Plastic inks

___ Slide crayons

Others (list)

____

____

___ ______________________________

___ ______________________________

PHOTOGRAPHIC

___ 35mm Camera

___ 4 x 5 View Camera

___ Enlarger

___ Polaroid Camera

___ Darkroom

___ Copy Stand w/lights

Others (list)

___ ______________________________

___ ______________________________

REPRODUCTION EQUIPMENT

___ Reflex

___ Thermofax

___ Mimeograph

___ Ditto (spirit duplicator)

___ Diazo

___ Silk screen

Others (list)

___ ______________________________

___ ______________________________

___ ______________________________

5. (Cont'd)

LETTERING

___ Mechanical lettering devices (LeRoy, Wrico, Letterguide, Varigraph, etc.)

___ Tile letters

___ Felt point pen

___ Rubber stamp set

___ Primary typewriter

___ Stencil (metal or paper)

Others (list)

___ ______________________________

___ ______________________________

___ ______________________________

6. What seem to be the deterrents to the expansion of your local preparation program? Check all items that apply and then rank the three items that appear to be the greatest deterrents with (1) being the greatest, (2) second greatest, and (3) third most prevalent.

___ Lack of administrative support

___ Lack of time for preparation of materials

___ Lack of materials for preparation

___ Lack of in-service training

___ Lack of knowledge and/or ability to produce material

___ Lack of preparation equipment

___ Lack of space for preparation

___ Lack of interest on part of teachers

___ Lack of supervisory time

Others (list)

___ ___________________________

___ ___________________________

7. How many hours per week of your professional work load is allocated for the administration and supervision of the local preparation program?

___ No time allocated - work completed on my own time.

___ Released from extra-curricular responsibilities to administer program. Number of hours weekly ____________________.

___ Part of my academic workload - Number of hours weekly _________________.

I have considered an academic weekly work load as ___________ hours.

8. When is the local preparation facility used most extensively by school personnel in the school or school system you are evaluating? (Rank the items that apply with (1) being the time most frequently used, etc. Rank only those items that apply.)

___ Preschool

___ During regular school hours

___ After school hours

___ During in-service training periods

___ Noon period

Others (list)

___ ______________________________

___ ______________________________

___ ______________________________

9. How many teachers are there in the school or school system about which you have provided information? ______________.

10. NOTE: If you know of other preparation centers (as specified in item #2) within your school system that should be included in this study, please complete the following:

Person to contact ______________ Person to contact ______________

School address ______________ School address ______________

______________________________ ______________________________

11. We hope to identify and visit approximately 20 schools or school systems with outstanding preparation programs. If your school or school system's local preparation program is selected, are you willing to have it included in this study?

YES NO (Circle One)

12. Please complete the following information.

Who provided the information in this questionnaire (Name) ______________

Position ______________

Address ______________

____

TEACHER INTERVIEW GUIDE ON
PREPARATION OF INSTRUCTIONAL MATERIALS

Prepared by

Dr. John Moldstad
Dr. Gene Faris

NATIONAL DEFENSE EDUCATION ACT RESEARCH PROJECT

1961

TEACHER INTERVIEW GUIDE

Name of Teacher ______________________ Grade Level ( ) Elementary
( ) Jr. High
Name of School ______________________ ( ) Sr. High
( ) Special
School System ______________________ List ______________
City and State ______________________

1. What subjects do you teach? ______________________.
2. What is your normal teaching load in terms of number of students and classes? ______________________.
3. How many years have you been a classroom teacher? _______. Television teacher? __________. Large group instructor? ____________.
4. Have you taken a formal course dealing with the local preparation of teaching materials? Yes ____ No ____. How many? _________.
5. Have you attended any short courses, clinics, workshops, etc. dealing with the local preparation of teaching materials? Yes ____ No ____ How many? ___________.
6. Who produces materials, in the local preparation facilities, that you utilize in your classroom? Place a (1) beside the statement which indicates the producers of the greatest number of materials you use, a (2) for the second most extensive producer, and (3) for the third most extensive producer, and so forth. (Do not rank non-producers)

_____ Teacher with or without the assistance of the instructional materials coordinator.

_____ Instructional materials coordinator with teacher as client or educational author.

_____ Student assistants under the supervision of the instructional materials coordinator and in consultation with the teacher.

6. (Cont'd)

_____ Hired artist in consultation with the teacher.

Others (list)

_____ ____________________

_____ ____________________

7. When do you make most extensive use of your local preparation facility? (Rank the items that apply with (1) being the time most frequently used, etc. Rank only those items that apply in your situation).

_____ Preschool

_____ During regular school hours

_____ After school hours

_____ During in-service training periods

_____ Noon period

Others (list)

_____ ____________________

_____ ____________________

_____ ____________________

8. How many hours a week (average) do you spend in preparing and/or planning for the preparation of locally produced instructional materials?

0____ ½ ____ 1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ More than 6 _____

9. Do you feel that you spend sufficient time in planning and/or preparing materials for use in your classroom to provide an optimum learning environment through the use of locally prepared instructional materials?

Yes ____ No ____ If not, how many hours a week do you feel you would need to spend to prepare the optimum number of instructional materials?

____________.

10. Indicate the types of instructional materials you have used in your classroom that were produced in your local preparation facility. Also, indicate who produced these materials, whether they were prepared specifically for you, and whether they were satisfactory or not in terms of physical quality.

INSTRUCTIONAL MATERIALS	WHO PRODUCED				WAS THIS MATERIAL PREPARED SPECIFICALLY FOR YOU		PHYSICAL QUALITY Check whether materials prepared by the groups below were satisfactory (SAT) or unsatisfactory (UNSAT) in terms of physical quality.			
	Teachers	Students	A-V Specialist	Hired Artist	YES	NO	Student Produced	Produced by A-V Specialist	Produced by Hired Artist	Produced by Myself
Chalkboard							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Diorama							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Bulletin Brd. & Peg Brd.							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Display Area							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Non-projected graphic materials (Maps, Charts, Graphs)							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Non-projected photographs or still pictures used for other than bulletin board displays							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Magnetic Board							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Flannelboard							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Ditto and Mimeograph							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Electric Board							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Projected Opaque Materials							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Overhead Transparencies							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
2 X 2 Slide Materials							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
$3\frac{1}{4}$ X 4 Slide Materials							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Film Strip							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__
Motion Pictures							SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__	SAT__ UNSAT__

11. Check the statement that best describes your opinion concerning the quantity of locally produced materials available for your use:

____ A. All materials needed were either produced by myself or other personnel.

____ B. I would like more materials and would produce them if time was allowed in the regular school day for this activity.

____ C. I would like more materials if someone else produced them and the materials were of satisfactory quality.

____ D. There are more locally produced materials of acceptable quality available now than I can utilize effectively.

12. Which of the following statements reflect a deterrent that prevents teachers from making maximum use of your local preparation center. Rank up to three, those items that appear to be greatest deterrents with (1) being the greatest, (2) second greatest, and (3) third greatest deterrent.

____ Lack of administrative support
____ Lack of time for preparation of materials
____ Lack of materials needed for preparation
____ Lack of in-service training
____ Lack of knowledge and/or ability to produce materials
____ Lack of preparation equipment
____ Lack of space and facilities for preparation
____ Lack of interest on part of teachers
____ Lack of supervisory leadership and assistance
____ Lack of accessibility (in terms of time and distance)

Others (list)

____ ______________________________

____ ______________________________

13. To what extent has preparing your own teaching materials helped you gain a better understanding of the subject matter you teach?

____ A. No gain in knowledge of subject matter.
____ B. Moderate gain in knowledge of subject matter.
____ C. Considerable gain in knowledge of subject matter.

14. To what extent has an understanding of graphic preparation techniques increased the variety of materials that you use in your classroom teaching?

____ A. No increase in variety of materials used in my teaching.
____ B. Moderate increase in variety of materials used in my teaching.
____ C. Considerable increase in variety of materials used in my teaching.

15. To what extent has your understanding of graphic preparation techniques helped you to discover new ways of presenting subject matter that you had previously felt did not readily adapt to visualization?

____ A. No help in discovering new ways of presenting subject matter.
____ B. Moderate help in discovering new ways of presenting subject matter.
____ C. Considerable help in discovering new ways of presenting subject matter.

16. Which of these statements best reflects your philosophy concerning the most desirable procedure for the local preparation of needed instructional materials?

____ Given adequate time, I believe the most satisfactory arrangement would be for the teacher to prepare her own materials with or without the assistance of the instructional materials coordinator.

16. (Cont'd)

____ I believe the most satisfactory arrangement would be for the instructional materials coordinator to prepare the materials for the classroom teacher, with the teacher serving as client or educational author.

____ I believe the most satisfactory arrangement would be for student assistants to prepare the materials under the guidance of the instructional materials coordinator and in cooperation with the teacher.

____ I believe the most satisfactory arrangement would be for a hired artist to prepare the materials in consultation with the teacher.

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